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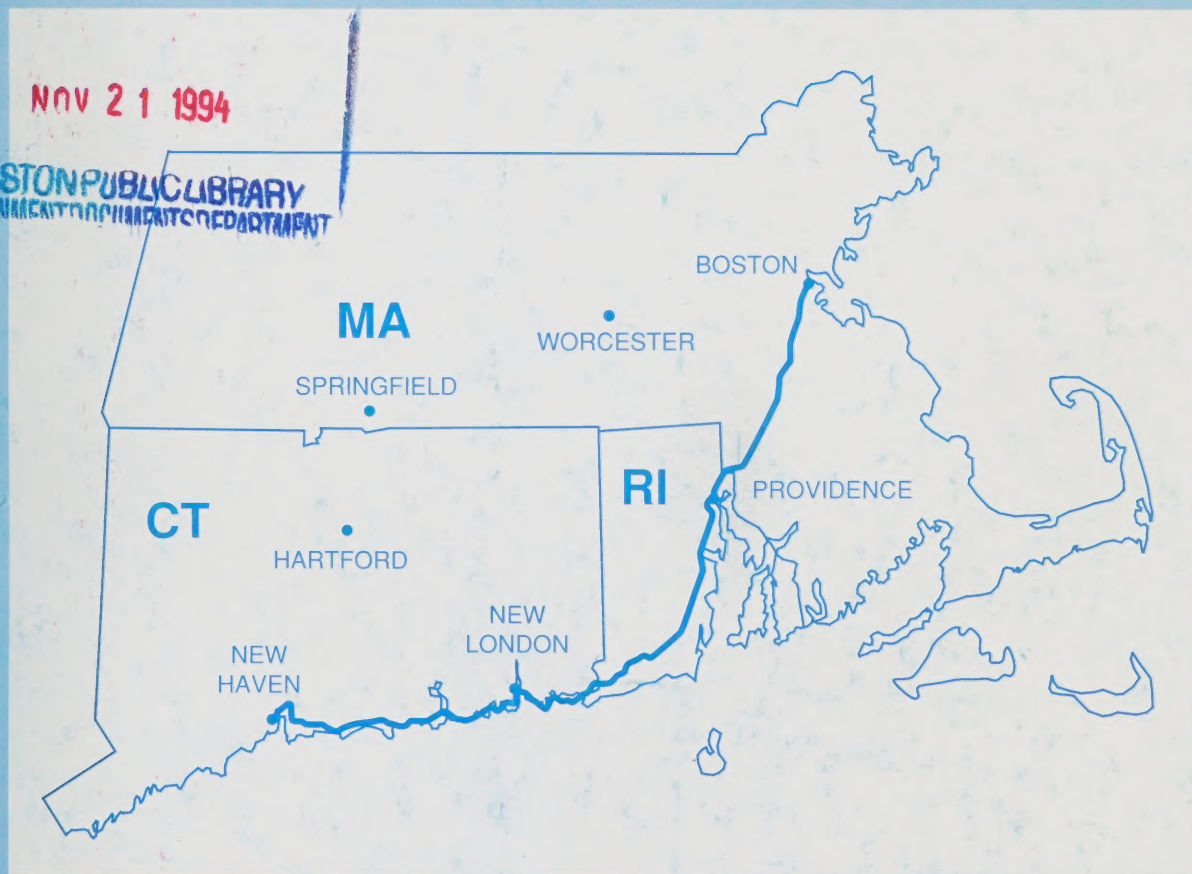
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Final Environmental Impact Statement/Report

Volume III: Response to Comments on Draft Environmental Impact Statement/Report

of Railroad Development
ington, D.C. 20590

Northeast Corridor Improvement Project Electrification - New Haven, CT to Boston, MA



Research and Special Programs Administration
U.S. Volpe National Transportation Systems Center
Cambridge, MA 02142-1093

Massachusetts EOE
Number: 9134

RA/RDV-94/01-C
NTSC-FRA-94-7

Final Report
October 1994

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1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE October 1994		3. REPORT TYPE AND DATES COVERED Final Report	
4. TITLE AND SUBTITLE Northeast Corridor Improvement Project Electrification-New Haven, CT to Boston, MA Final Environmental Impact Statement/Report Volume III: Response to Comments on Draft Environmental Impact Statement/Report				5. FUNDING NUMBERS RR495/R4215	
6. AUTHOR(S)					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Daniel, Mann, Johnson, and Mendenhall/ Frederic R. Harris, Inc.* 66 Long Wharf Boston, MA 02110				8. PERFORMING ORGANIZATION REPORT NUMBER DOT-VNTSC-FRA-94-7	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Department of Transportation Federal Railroad Administration 400 Seventh Street, SW Washington, DC 20590				10. SPONSORING/MONITORING AGENCY REPORT NUMBER DOT-FRA-RDV-94-01-C	
11. SUPPLEMENTARY NOTES U.S. Department of Transportation Volpe National Transportation Systems Center *under contract to: Kendall Square Cambridge, MA 02142					
12a. DISTRIBUTION/AVAILABILITY STATEMENT This document is available to the public through the National Technical Information Service, Springfield, VA 22161				12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This document is the final environmental impact statement and final environmental impact report (FEIS/R) on the proposal by the National Railroad Passenger Corporation (Amtrak) to complete the electrification of the Northeast Corridor main line by extending electric traction from New Haven, CT., to Boston, MA. This FEIS/R supplements the draft document published in October 1993 and made available for public comment through January 21, 1994. Comments received on the Draft EIS/R have been reviewed and evaluated. In some cases design refinements were made, additional analyses were performed, and further explanations of potential impacts were incorporated into the FEIS/R as a result of those comments. This FEIS/R presents a comprehensive assessment of the consequences of each project alternative on the natural, physical and social environment. Environmental consequences are identified and, where possible, quantified. The FEIS/R consists of four volumes. This document (Volume III) of the FEIS/R presents summaries of comments received on the DEIS/R and responses to these comments. Volume I is the main body of the FEIS/R and includes a 4(f) Statement on the proposed location of an electrification facility in the Great Swamp Wildlife Management Area. Volume II presents additional technical studies to supplement Volume III of the DEIS/R issued in October 1993. Volume IV reprints the comments received on the DEIS/R.					
14. SUBJECT TERMS National Environmental Policy Act, Environmental Impact Statement, Northeast Corridor Improvement Project, Scoping, Alternatives, Electrification, Catenary System, Federal Railroad Administration, Amtrak				15. NUMBER OF PAGES 354	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT		

PREFACE

This document is Volume III: Response to Comments on Draft Environmental Impact Statement/Report, of the final environmental impact statement and final environmental impact report (FEIS/R) on the proposal by the National Railroad Passenger Corporation (Amtrak) to complete the electrification of the Northeast Corridor main line by extending electric traction from New Haven, CT, to Boston, MA.

This FEIS/R has been prepared by the Federal Railroad Administration (FRA) and the John A. Volpe National Transportation Systems Center (VNTSC) of the Research and Special Programs Administration through a contract with the joint venture of Daniel, Mann, Johnson and Mendenhall, Inc., and Frederic R. Harris, Inc. (DMJM/Harris).

This FEIS/R supplements the draft document published in October 1993 and made available for public comment through January 21, 1994. Comments received both in writing and at a number of public hearings have been reviewed and evaluated. In some cases design refinements were made, additional analyses were performed, and further explanations of potential impacts incorporated into the FEIS/R as a result of those comments.

This FEIS/R presents a comprehensive assessment of the consequences of each project alternative on the natural, physical and social environment. Aspects of the natural environment addressed include noise, vibration, energy, air quality, aesthetics and natural or ecological resources. The physical environment includes land use, electromagnetic fields and interference, and archaeological resources. The social environment includes socioeconomics, historic resources, public safety, and transportation. Environmental consequences are identified and, where possible, quantified. Mitigation measures that will reduce or eliminate potential adverse impacts are also identified. Based on these factors, the environmental impact of each alternative was assessed.

Draft Record of Decision

Based on the analysis contained in the FEIS/R and other relevant considerations, FRA has selected the project proposed by Amtrak as modified by appropriate measures to mitigate adverse impacts as FRA's preferred alternative.

The executive summary of this FEIS/R includes the draft Record of Decision by the FRA regarding its decision in selecting the preferred alternative. The final Record of Decision will be issued by FRA no sooner than 30 days after the release of this FEIS/R.

Organization of the FEIS/R

This FEIS/R consists of four volumes. Volume I is the main body of the FEIS/R. Volume II presents additional technical studies to supplement Volume III of the DEIS/R issued in October 1993. Volume III of the FEIS/R presents summaries of comments received on the DEIS/R and responses to these comments. Volume IV reprints the comments received on the DEIS/R.

METRIC/ENGLISH CONVERSION FACTORS

ENGLISH TO METRIC

LENGTH (APPROXIMATE)

- 1 inch (in) = 2.5 centimeters (cm)
- 1 foot (ft) = 30 centimeters (cm)
- 1 yard (yd) = 0.9 meter (m)
- 1 mile (mi) = 1.6 kilometers (km)

AREA (APPROXIMATE)

- 1 square inch (sq in, in²) = 6.5 square centimeters (cm²)
- 1 square foot (sq ft, ft²) = 0.09 square meter (m²)
- 1 square yard (sq yd, yd²) = 0.8 square meter (m²)
- 1 square mile (sq mi, mi²) = 2.6 square kilometers (km²)
- 1 acre = 0.4 hectares (he) = 4,000 square meters (m²)

MASS - WEIGHT (APPROXIMATE)

- 1 ounce (oz) = 28 grams (gr)
- 1 pound (lb) = .45 kilogram (kg)
- 1 short ton = 2,000 pounds (lb) = 0.9 tonne (t)

VOLUME (APPROXIMATE)

- 1 teaspoon (tsp) = 5 milliliters (ml)
- 1 tablespoon (tbsp) = 15 milliliters (ml)
- 1 fluid ounce (fl oz) = 30 milliliters (ml)
- 1 cup (c) = 0.24 liter (l)
- 1 pint (pt) = 0.47 liter (l)
- 1 quart (qt) = 0.96 liter (l)
- 1 gallon (gal) = 3.8 liters (l)
- 1 cubic foot (cu ft, ft³) = 0.03 cubic meter (m³)
- 1 cubic yard (cu yd, yd³) = 0.76 cubic meter (m³)

TEMPERATURE (EXACT)

$$[(x-32)(5/9)]^{\circ}\text{F} = y^{\circ}\text{C}$$

METRIC TO ENGLISH

LENGTH (APPROXIMATE)

- 1 millimeter (mm) = 0.04 inch (in)
- 1 centimeter (cm) = 0.4 inch (in)
- 1 meter (m) = 3.3 feet (ft)
- 1 meter (m) = 1.1 yards (yd)
- 1 kilometer (km) = 0.6 mile (mi)

AREA (APPROXIMATE)

- 1 square centimeter (cm²) = 0.16 square inch (sq in, in²)
- 1 square meter (m²) = 1.2 square yards (sq yd, yd²)
- 1 square kilometer (km²) = 0.4 square mile (sq mi, mi²)
- 1 hectare (he) = 10,000 square meters (m²) = 2.5 acres

MASS - WEIGHT (APPROXIMATE)

- 1 gram (gr) = 0.036 ounce (oz)
- 1 kilogram (kg) = 2.2 pounds (lb)
- 1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons

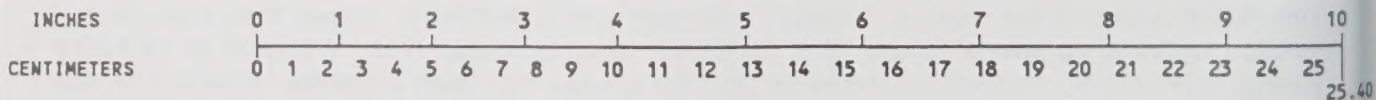
VOLUME (APPROXIMATE)

- 1 milliliters (ml) = 0.03 fluid ounce (fl oz)
- 1 liter (l) = 2.1 pints (pt)
- 1 liter (l) = 1.06 quarts (qt)
- 1 liter (l) = 0.26 gallon (gal)
- 1 cubic meter (m³) = 36 cubic feet (cu ft, ft³)
- 1 cubic meter (m³) = 1.3 cubic yards (cu yd, yd³)

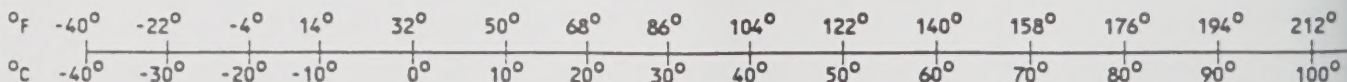
TEMPERATURE (EXACT)

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Final Environmental Impact Statement/Report

Northeast Corridor Improvement Project
Electrification - New Haven CT to Boston MA

Volume III: Response to Comments on the Draft Environmental Impact
Statement/Report

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Volume III

Responses to Comments

1.0 INTRODUCTION

This volume contains responses to the comments received on the DEIS/R on the proposed electrification of the Northeast Corridor from New Haven, CT to Boston, MA. The DEIS/R was made available for public comment in October, 1993. Initially, the comment period was scheduled to close on December 3, 1993; however, in response to several requests, the comment period was extended until January 21, 1994.

FRA received approximately 500 letters commenting on the DEIS/R. In addition, 117 people commented on the DEIS/R at public hearings held by the FRA in Boston, MA (afternoon and evening of November 16), Cranston, RI (afternoon and evening of November 17), Old Saybrook, CT (afternoon of November 18), and New London, CT (evening of November 18).

The text of this volume consists of comments abstracted and summarized from the oral testimony and the letters received. In cases where the oral testimony was a summary of written comments, the response to the oral testimony is a reference to that person's or organization's written comments. The letters received are reproduced in Volume IV. Several letters attached appendices which have not been reproduced. The letters in their entirety, together with any attachments, as well as the transcripts of the public hearings, are available for public review at the offices of the U.S. Department of Transportation, Volpe National Transportation Systems Center, Kendall Square, Cambridge, Massachusetts, 02142. Telephone (617) 494-2002.

This volume consists of three sections. The first section is a summary of the nine most frequently received comments and responses to these comments. The second section presents the specific comments received and responses to these comments and is divided into four parts (one for each of the three states and a fourth for miscellaneous comments). The third section is a summary of comments received at public hearings.

2.0 THE MOST FREQUENTLY RAISED ISSUES

Many of the persons commenting on the proposed project, both in writing and in person, raised the same issues. This section provides a summary of the most frequently made comments in no particular order. These comments are:

- | | |
|----------------------------------|-----------------------------------|
| • Alternate routes | • Alternate technologies |
| • Freight Rail | • Moveable Bridges/Marine Traffic |
| • EMF | • Noise/Vibration |
| • Visual Impacts | • At-grade Crossings |
| • Modal Shift to High-Speed Rail | |

3.0 SUMMARY OF THE MOST FREQUENTLY RAISED ISSUES

3.1 ALTERNATIVE ROUTES

Comment: Many comments suggested that the EIS/R should look at alternative routes instead of upgrading the existing Northeast Corridor main line from New Haven through Providence to Boston, also referred to as the Shore Line.

Response: The discussion of alternative routes has been expanded in Section 2.2.4 of the FEIS/R.

The Northeast Corridor Improvement Project (NECIP), was the culmination of several years of studies and legislation addressing the need for improved rail service between Washington to Boston. The statutory authorization for NECIP specifically required improvements to the main line of the Northeast Corridor which includes the Shore Line Route.

Notwithstanding the statutory requirement to upgrade the Shore Line, the final programmatic environmental impact statement (PEIS) issued for NECIP in June 1978 investigated the Southern New England Inland Route from New Haven through Hartford, Springfield and Worcester to Boston as an alternative route to the Shore Line Route.

The PEIS concluded that: "To meet the required system goals of improved trip times with available resources by the required date, the proposed routing via the Shore Line between New Haven and Boston is the preferred alternative." Development of the Inland Route to provide the trip time equivalent of the Shore Line Route was projected to take longer, cost more, and have greater environmental impact than completing NECIP on the Shore Line. Based on the PEIS, in 1978 FRA selected improvement of the Shore Line as part of the preferred NECIP program. Since that time, approximately \$1.1 billion has been invested by FRA and Amtrak in improvements to the Shore Line.

The subject EIS/R is a site specific analysis of one component of upgrading the Shore Line, extension of electric traction from New Haven to Boston. Alternative routes were reviewed to determine whether there was a clearly superior alternative to completing the upgrade of the Shore Line that warranted more detailed analysis. This EIS/R reviewed and updated the analysis of the Inland Route, as well reviewed a possible realignment of approximately 50 miles of the Shore Line between Old Saybrook, CT, and East Greenwich, RI, and possible restoration of the largely abandoned Airline Route through Willimantic and Putnam, CT, and Franklin, MA.

In this update of alternatives, it was found that no change in circumstance has established an alternative route clearly superior from an environmental standpoint to the program decision made by FRA in 1978 to improve the Shore Line. The different alternative routes would lessen or eliminate the impacts associated with the NECIP in certain specific areas. This would be offset by the significant additional impacts associated with construction of these new routes as well as the transference of many of the operational impacts to other areas. Construction of track improvements associated with alternative alignments would require extensive excavation and grading and the construction of bridges over and in waterways and wetlands with resulting potential impacts on vegetation, wildlife, soil erosion, water quality, and other construction-related impacts.

The time required to obtain necessary permits and approvals and to construct an alternative route would substantially delay the environmental benefits that will be derived from high-speed rail service between Boston and New York City. Moreover, each of the route alternatives have significantly higher capital costs. At this time, the necessary capital to implement these alternatives is not available and it does not appear likely that it will become available in the foreseeable future. This calls into question the viability of these alternatives.

On the other hand, as a result of NECIP improvements to the Shore Line undertaken since 1978, most of the environmentally-sensitive construction activities on the Shore Line have already taken place. These include: undercutting and ballast renewal, crosstie replacement, replacement of the moveable bridges at Shaw's Cove and Mystic, right-of-way improvements including a hurricane barrier at Shaw's Cove, elimination of 35 grade crossings, 19 bridge deck conversions, construction of the signal system, realignment of tracks and replacement of the station at Providence, RI, and restoration of the station at New London.

As a consequence of the review of these alternatives, FRA continues to believe that improvements to the Shore Line Route will achieve the NECIP program goals sooner, with less environmental impact and at lower cost than any alternative route.

3.2 ALTERNATIVE TECHNOLOGIES

Comment: Many of the comments suggested that technologies other than electric traction were presently available that could achieve trip time goals of NECIP with less environmental impact than the proposed electrification project.

Response: The discussion and analysis of alternative technologies has been expanded in Sections 2.2 and 2.3 and throughout Chapter 4 of Volume I of the FEIS/R.

The NECIP PEIS analyzed the wide range of the technologies available or under development in 1978, including gas turbine-powered high-speed trains. Amtrak's pre-1978 experience with operating gas turbine locomotives at higher speeds indicated such equipment could not consistently operate as fast as their electric counterparts, cost more to operate, and were more expensive to maintain. The PEIS concluded that electrification offered the best means to achieve the NECIP program goals.

Since 1978, there have been no new non-electric high-speed (in excess of 125 mph) rail systems or technologies introduced. (The last gas turbine passenger locomotive built anywhere in the world was completed in 1981). In this time period efforts to develop high-speed rail service worldwide have focused on electrically powered trains. These include the advanced Japanese *Shinkansen*, the French *TGV*, the German *ICE*, the Swedish *X-2000*, the British *Intercity 225*, the Spanish *AVE*, and the Italian *ETR 450*, and *ETR 500*. As a consequence, the gap between the proven capabilities of non-electric technology and electric technology has widened. There are no existing forms of nonelectrified rail operation that can meet the current and future capabilities of NECIP electrified operation.

There have been, however, two recent developments in the area of non-electric high-speed trains in the U.S. In the first, Amtrak, as part of its high-speed trainset acquisition, has included in its solicitation a requirement that two of the 26 trainsets manufactured under the first phase of this program be powered by fossil fuel locomotives capable of speeds up to 125 mph. These trains would be used on non-electrified lines connecting to the NEC and for demonstrations elsewhere in the country. FRA's discussions with participants in the NEC equipment competition indicate that the designs for the fossil fuel locomotives will be conservative and will be based on incorporating the best of proven technologies into a locomotive rather than advancing the state-of-the-art.

The second development is the Clinton Administration's High-Speed Rail Initiative, which includes a proposal to establish and fund a new high-speed rail technology development program. A major part of this program is FRA's proposal to facilitate development of a high-speed non-electric locomotive/trainset with a top speed of 150 mph+, an acceleration capability equivalent to the best electric locomotives/trainsets, and which addresses the cost, reliability, and environmental issues associated with past non-electric locomotives. As part of the No-Build Alternative, scenarios are discussed which consider the impacts associated with implementing alternatives based on the products of these two programs.

In general, the Amtrak fossil fuel locomotive (referred to in the FEIS/R as the FF-125) has an inferior performance when compared to the proposed electric operation. The trip time is approximately 20 minutes longer, it carries fewer passengers, it consumes more energy, it generates more noise and air pollution, and because of the nature of the third rail electric operation in the New York City tunnels, it exacerbates the capacity problems in these tunnels and at Penn Station. The FF-125 would not, however, have the visual impact associated with catenary and supporting poles and would not create electromagnetic fields along the rail line and would not require the construction of electric support facilities such as substations. In areas where impacts are associated with increased train operations, such as effects of increased closures of moveable bridges over waterways (summary comment 3.4), effects on freight service (summary comment 3.3) and impacts on grade crossing safety (summary comment 3.8), the FF-125 scenario's impacts would be very similar to the Proposed Action.

If the goals of FRA's high-speed non-electric locomotive program are achieved, the resulting high-speed trains would provide the equivalent level of service as the proposed electric operation with significant improvements in energy consumption, air pollutant and noise emissions over that envisioned for the FF-125 scenario. As with the FF-125 scenario, this high-speed train, referred to as the FRA-150, would not have the visual impact associated with catenary and supporting poles and would not create electromagnetic fields along the rail line or require construction of electric support facilities. In areas where impacts are associated with increased train operations, such as effects of increased closures of moveable bridges over waterways (summary comment 3.4), effects on freight service (summary comment 3.3) and impacts on grade crossing safety (summary comment 3.8), the FRA-150's impacts would be the same as the Proposed Action.

The major negative aspects of this alternative are the uncertainty and delays involved with implementation. The first uncertainty is technical. FRA's goals are ambitious and often technology development programs fail to meet their goals. Therefore it is uncertain the extent to which FRA can facilitate development of a locomotive that can provide equal service as the electric locomotives are capable of today.

Compounding the technical uncertainty is the financial uncertainty. FRA does not presently have funds to undertake such a program. Funds earmarked for electrification cannot be used to develop non-electric technologies. Such funds can only be made available by Congress and it is unclear whether or to what extent Congress will fund such a program to a successful conclusion. Last year FRA requested \$10 million to initiate the non-electric locomotive program. Congress did not provide any funding. This year FRA requested \$6.5 million specifically for this program and \$9.5 million for associated efforts. At this time, Congress has not taken final action on this request. In their separate versions of the Department of Transportation and Related Agencies Appropriations Act for Fiscal Year 1995, the House of Representatives provided \$3 million and the Senate provided no funds for this proposed program. Finally, even if the funds are made available and the goals are achieved, there would be substantial delay in realizing the benefits of high-speed rail. FRA envisions that under its program, if fully funded, a prototype high-speed non-electric locomotive would not complete testing for seven to ten years.

A number of comments specifically addressed consideration of the *TurboTrain* or *TurboTrain III* (*TurboTrain* is discussed in detail in Section 2.3 of Volume I of the FEIS/R). In 1966, the Department of Commerce's Office of High-Speed Ground Transportation (which became part of FRA upon creation of the Department of Transportation in 1967) contracted with United Aircraft Corporate Systems Center for demonstration on the Boston to New York City portion of the NEC of a lightweight gas turbine train incorporating advanced technical features. The first *TurboTrain* came off the assembly line in the summer of 1967 and the commercial demonstration began on April 8, 1968.

At the conclusion of the tests and demonstrations in 1973 (which saw a *TurboTrain* in a test configuration reach a top speed of 170 mph), the two trainsets used in the FRA demonstrations were turned over to Amtrak. These trains were then placed in regular Amtrak service and were the fastest regularly scheduled trains over this corridor to date, with scheduled trip times between Boston's South Station and New York's Pennsylvania Station as low as 3 hours and 44 minutes with no intermediate stops.

Amtrak found that *TurboTrains* were costly to operate and expensive to maintain. When compared to a typical Amtrak train pulled by a diesel locomotive, Amtrak found that the *TurboTrain* was about three times more expensive to maintain and consumed 40 percent more fuel. It is unclear the extent to which this was attributable to the design or to the limited experimental scope of the demonstration that produced this equipment.

Amtrak terminated operation of the *TurboTrains* in September 1976 and its *TurboTrains* were scrapped in 1979. Five additional *TurboTrains* were produced for Canadian National (CN) for use in the Montreal-Toronto corridor. CN terminated its *TurboTrain* operation in 1979 and this equipment was also scrapped.

The designers of *TurboTrain* have developed an improved design which they assert addresses the shortcomings displayed by the equipment developed in the 1960s. This new design and its variants have been referred to as *TurboTrain III* and *DMT-II*. In reviewing this design, Amtrak (which would purchase any trainsets used for intercity service between Boston and New York City) has expressed a number of concerns. The train is not configured in a manner consistent with Amtrak's view of the needs of the Boston to New York City market. Separate first class and food service cars would need to be added which might affect power requirements. In addition, only one car is handicap accessible while the regulations implementing the Americans with Disabilities Act require that all cars be accessible. Finally, the *TurboTrain* design has a low center of gravity with a low platform height. The Northeast Corridor stations are designed with high platforms to reduce dwell time and accommodate handicapped passengers. Renfe Talgo, an established manufacturer of a high-speed train with a similar low platform design withdrew from consideration for Amtrak's high-speed trainset procurement, in part, because of the difficulties associated with converting its design for high-platform operation.

The developers of the *TurboTrain III* and related designs have indicated that Federal research and development funds are required to complete the design and develop a prototype for testing. None of the prequalified consortiums competing in Amtrak's high-speed trainset procurement propose a design similar to *TurboTrain III*. As a consequence, *TurboTrain* and its related designs would be one of many competing designs that could fall under the proposed FRA high-speed non-electric development program identified above and can be considered as part of the No-Build Alternative - FRA-150 scenario. As discussed in the context of that alternative scenario, it is unclear whether or when sufficient funds will become available to facilitate the development of an advanced design to the prototype testing stage. Even if such funds become available, it is uncertain whether the resulting equipment would meet its designers' expectations and Amtrak's needs.

3.3 FREIGHT RAIL

Comment: Several comments were received regarding the potential for the electrification project and increases in the number and speed of passenger trains to impact the ability to provide freight rail service along the NEC main line.

Response: Potential impacts on freight rail service are discussed in Volume I, Section 4.9.3. Potential impacts to the local economies that could result from degraded freight service are discussed in Volume I, Section 4.2.2. Potential impacts to energy consumption and air quality are discussed in Volume I, Sections 4.6 and 4.10 respectively.

The potential for impact on freight rail service raised in the comments could result from distinct aspects of the Proposed Action and NECIP as a whole. These include:

- delays in freight service during construction of the electrification system
- delays in freight service as a result of reduced operating windows caused by high-speed operation
- additional cost and difficulty in providing high and wide clearances projected to be needed for some future freight movements, in particular the proposed development of the former navy base at Quonset Point, RI, into a commercial port
- delays in freight service as a result of reduced operating windows caused by more frequent passenger trains
- delays in freight service as a result of insufficient operating windows to handle possible growth in freight service together with more frequent and faster trains

The DEIS/R addressed the potential of impact on freight rail service. This analysis has been expanded in the FEIS/R. The primary area of concern is the area served by the Providence and Worcester Railroad in Rhode Island and Connecticut. In the absence of measures to increase the capacity, there could be service delays at existing and projected freight volumes. Such service delays could result in increased costs for freight rail service and cause some shippers to use motor carriers in lieu of rail. This diversion, in turn, could have adverse impacts on traffic, energy consumption and air quality.

During FRA's preparation of the Northeast Corridor Transportation Plan (NECTP), an extensive analysis was undertaken to identify the potential future demands to be placed upon the NEC main line, areas where existing capacity would be inadequate to meet these demands, and possible enhancements to the NEC to address capacity needs. Based upon that analysis, this FEIS/R has included a number of measures designed to mitigate the potential impacts of the proposed electrification project on freight service.

Specifically, Amtrak will develop a plan for storage of work equipment and dispatching of trains to minimize disruptions to revenue service operations by commuter and freight railroads. In selected locations, Amtrak will restore previously existing side tracks on the Northeast Corridor main line roadbed to provide adequate capacity to maintain existing levels and schedules of intercity, commuter and freight service when high-speed service begins. In addition, switch heaters will be incorporated into the main line and adjacent side tracks to ensure that freight movements are not delayed during winter due to frozen tracks.

With regard to the potential of the electrification project to adversely affect future efforts to develop improved freight access to the proposed port development at Quonset Point, it is noted in the FEIS/R that the Rhode Island Department of Transportation (RIDOT) and the Federal Highway Administration (FHWA) have initiated a review of alternative approaches for providing freight access required by the State's proposed port development. As part of this effort, these parties began preparation of an EIS in June 1994 with FRA as a cooperating agency.

A number of changes have been incorporated into the Proposed Action that will permit the NEC main line to accommodate whichever alternative is selected by the State. Clearances historically used by existing rail freight service (those used within the last 10 years) will be preserved or reestablished. In addition, Amtrak's facilities will be designed to accommodate any future program to provide enhanced clearances. One aspect of Amtrak's original design already addressed one concern in this area. The catenary poles are sized to permit a catenary height that would accommodate all modern rail cars. In addition, in areas where the State of Rhode Island is considering construction of a third track parallel to the NEC main line to provide enhanced clearances (Boston Switch to Davisville), Amtrak has redesigned its catenary support system so that it will not have to be relocated if the State proceeds with this project. Finally, Amtrak will delay construction activities in this area to provide the State an opportunity to determine whether it will fund the third track. Should the State decide to proceed, then construction activities in this area will be coordinated.

Another source of potential impacts from NECIP on rail freight service results from increased use of the NEC by intercity passenger, commuter and freight rail operations. Such increases in service could reduce the time available for freight service, forcing the freight service to operate at unusual times such as the late night, which in turn could drive increase the costs of the railroad and its shippers, make freight service less desirable and, in the extreme, result in diversion of freight rail shipments to trucks or the relocation of shippers to other rail lines.

This latter potential impact is not directly related to the electrification project itself but, rather, to an increased number of intercity passenger trains that would result from NECIP improvements and increased commuter operations and expanded freight service. This would be a concern even if the electrification project does not proceed and some form of nonelectric high-speed rail technology (such as gas turbine-powered trains) is used. These concerns, however, are largely mitigated by the measures identified above. The Northeast Corridor Transportation Plan incorporates a number of additional measures to address potential future growth in demand to use the NEC main line including such items as the improved signal system.

3.4 MOVEABLE BRIDGES/MARINE TRAFFIC IMPACTS

Comment: A number of commenters expressed concern over the potential for increased intercity rail traffic to limit the access of marine traffic to waterways crossed by five moveable (e. g., draw or swing span) railroad bridges. The commenters are concerned that the resulting delays and restrictions would have an adverse impact on the economies of the coastal communities.

Response: This impact is discussed in Volume I, Sections 4.9 and 4.2 of the FEIS/R.

There have been numerous complaints about Amtrak's past operation of these bridges, most notably unreliable operation or excessive delays in opening bridges. Several aspects of NECIP such as the new signal system, modern train fleet and improved equipment maintenance will act to address some of the historic reliability problems. However there will be a significant increase in the number of trains crossing the five moveable bridges.

The proposed project, electrification of the rail line between New Haven and Boston, does not increase the frequency of rail service per se. Rather the increase in the number of trains results from the improved service that results from NECIP as a whole, as well as State initiatives to increase commuter rail service and projected increases in freight use. Again, this impact would be a concern even if the electrification project does not proceed and some form of non-electric high speed technology is used.

FRA simulated the operation of train service in the design year (2010) based on the optimum schedules for the trains. Each bridge was then analyzed to determine the amount of time it could be open to accommodate marine traffic assuming no schedule changes for the benefit of marine access (the worst case). The results of these simulations are presented in Volume II, Appendix 3B. These simulations show that the amount of time bridges are closed to marine traffic increases; however, there remains time during most hours when some marine access is available. Importantly, the increase in commuter rail traffic, which is not associated with NECIP, is a major contributor to this problem during some time periods.

The FEIS/R establishes the importance of marine traffic to the Connecticut economy, in particular the seasonal recreational boaters. After reviewing the nature of the bridge operation and that of marinas both upstream and downstream from the bridges, FRA's analysis concluded that, if accommodations are not made for marine traffic, there could be an adverse economic impact in this area.

In general, upstream marinas would become less desirable to owners of boats that cannot pass under the controlling bridge in the closed position. (In the case of Niantic and Mystic this accounts for almost all boats.) Boat owners would then tend to relocate to other marinas unencumbered by moveable bridges. This, in turn, could drive up the cost of slips below bridges and reduce the cost of slips and therefore the revenue (and perhaps the viability) of marinas above the bridges. Such relocations would result in localized economic impacts on marinas and their related businesses as well as increasing the cost of boating to some boat owners.

FRA's simulations (included in Volume II, Appendix 3B) also show that the schedules proposed by Amtrak and ConnDOT's Shoreline East Commuter Service could also result in violations of the Coast Guard regulations that govern operation of these bridges. In recognition of this and the potential of NECIP to impact this valuable component of the southeastern Connecticut economy, FRA and Amtrak have committed to mitigate this impact to the maximum extent possible. In conjunction with the Coast Guard, which has jurisdiction over the bridges, and with Shore Line East Commuter Service, ConnDOT, and other interested parties, Amtrak will develop an operating plan for each of the bridges. These plans will address bridge operations in such areas as scheduling of trains to provide adequate access at key times for marine traffic, improvements in signals and train control to enhance the reliability of rail bridge operations, bridge maintenance requirements, training of bridge operators, and other measures that can facilitate the marine access through the bridges. The latter may include such items as publishing notices to mariners when train schedules change and providing facilitators at the

bridges during peak seasons to help ensure the boats get through during the available openings. Amtrak will not permit a significant increase in the frequency of trains crossing the bridges until these plans have been developed.

The Northeast Corridor Transportation Plan recommends replacement for two of the five moveable bridges (Niantic and Groton). It is possible that in designing these bridges, the clearances under the bridges in the closed condition could be increased, thereby reducing the number of boats adversely affected by bridge closings. Amtrak will begin design studies of these bridges in the near future, in consultation with the Coast Guard and other interested parties, to identify opportunities to incorporate improved clearances into the bridge design. When plans mature to the point that Amtrak is ready to replace these bridges, each will require a separate site specific environmental analysis.

3.5 ELECTROMAGNETIC FIELDS (EMF)

Comment: Comments on EMF are generally categorized by five main subject areas. Three of these subject areas are relatively specific and include: EMF impacts on children, EMF impacts on workers (occupational studies), and EMF impacts on fish. The two other subject areas have comments that are diverse in nature and therefore are less specifically categorized as EMF level, and other comments.

The comments regarding the **EMF Impacts on Children** frequently cited the studies by Swedish researchers Feychting and Ahlstrom whose conclusions were that there was an association between EMF levels and childhood leukemia. Other comments mentioned a general concern about EMF effects on children. The comments on **EMF Impacts on Workers** are in regard to persons whose occupations expose them to high EMF levels, such as electricians and electrified rail workers. Some of the comments stated that the Swedish National Board for Industrial and Technical Development has recommended specific limits to the number of hours railroad workers can be exposed to high EMF levels. Other comments questioned the validity of occupational EMF standards promulgated or suggested by industrial hygiene and health organizations. There were also comments expressing concern about regular exposures to high EMF levels.

There are two groups of comments regarding **EMF Impacts on Fish**. The first is in regard to disruption of fish migration and spawning arising from the submersible power cables at the five moveable bridge crossings. The second is a general concern about impacts on fish and wildlife.

The fourth group of comments, categorized as **EMF Level** comments, include a series of questions related to the EMF levels projected in the DEIS/R. For example, some of the comments asked specific questions such as why was a 150-foot distance from the rail used for the population estimates, some questioned the specific background and side-of-rail EMF levels estimated, and some asked questions regarding the X-2000 train set testing that was performed.

The final category is called **Other Comments**. These are comments that are diverse and not amenable to categorization. Each one was addressed individually.

Response: The expanded analysis of EMF is addressed in Section 4.5 of Volume I and Chapter 5 of Volume II.

EMF Impacts on Children

The Feychting and Ahlstrom studies and other relevant studies were re-evaluated and specifically addressed in response to these comments. (They were evaluated as part of the DEIS/R, but were not specifically "called out" as has been done for the FEIS/R.) In addition, new studies that have been published since the time of issuance of the DEIS/R were examined. The findings of the FEIS/R are unchanged from the DEIS/R, specifically that, based on the observations from all relevant epidemiologic studies, there is no consensus in the scientific

community that there is or is not conclusive evidence that there is a link between EMF levels found in the environment, and health effects at levels found in the environment, including environments in the vicinity of power lines, can cause cancer in children. The residential exposure levels associated with the proposed electrification project are not different from levels found in the environment. Residential wayside exposures in Zone 3 (100 to 150 feet from the catenary electric facility) are not different from residential background levels, or levels in homes of controls in the epidemiologic studies. The FEIS/R provides a breakdown of potentially exposed children and adults along the corridor. Zone 1 (0 - 50 feet from the catenary or electric facility), in which fewer than 100 children are projected to reside, represents the highest level of potential exposure to children, yet the exposure levels in this zone are similar to levels reported as background EMF in a relatively urban area. Interim guidelines establishing exposure limits are significantly higher than exposures related to the proposed electrification project.

EMF Impacts on Workers (Occupational Studies)

Recent studies have improved upon the design of older studies in order to provide more reliable information. None of the studies indicates an overall increase in cancers, all types considered together, in electrical workers or other exposed populations. Consistent associations have not been reported for any specific type of cancer and exposure to high levels of magnetic fields. Few of the recent studies were able to estimate and control for other occupational exposures or personal factors that may affect the occurrence of cancer, and studies were limited in their ability to assess an individual's lifetime occupational exposure. Studies in progress are evaluating EMF exposures and brain cancer, leukemia, and breast cancer. There is no known (as of June 1994) recommendation by any Swedish government agency to limit the occupational hours of railroad workers or any other category of workers by reason of EMF exposure.

EMF Impacts on Fish

Assuming that the use of the Earth's DC magnetic field by fish or other marine organisms as a navigational cue is necessary for migration, one would expect no interference by the proposed project for two reasons. First, the sensitivity of the species is to DC magnetic fields not 60 Hz magnetic fields. Second, analyses and calculations made by Adair (1993, 1994) and Kirschvink et al. (1993) suggest that it is unlikely that detection of 60 Hz AC fields by mechanisms based upon magnetite tissues in the fish would operate at field strengths less than 50 mG. Such field strengths would not be encountered at distances greater than 10 feet from the cable or 3 feet above the bottom of the channel. This means that if fish swim close enough to detect the field, they will have an opportunity to swim above the perceived field, in order to avoid field strengths greater than 50 mG. Furthermore, none of the proposed submarine cables would span more than half the width of the water body being crossed, thus leaving the major portion of water bodies exposed to only the very low magnetic field intensities resulting from the catenary systems. Finally, the expected average magnetic field intensity 10 feet above the cable would be on the order of 12 mG while the bridge is open and 6 mG while it is closed, the latter condition being its predominant configuration. For these reasons, it is concluded that the electrification project would have no adverse impacts from EMF on the fish species at the river crossings.

EMF Levels

Comments associated with this subject area dealt with a variety of magnetic field strength issues, including: background EMF levels, expected EMF levels associated with the project, and the correlation of EMF levels presented in the DEIS/R with levels presented in other studies. In response to the comments, additional text was prepared to clarify techniques used to establish background levels and anticipated EMF levels associated with the project. Furthermore, additional EMF field measurements were collected in association with the proposed Roxbury, MA substation. This information was used to supplement and support information on EMF levels presented in the DEIS/R. Based on an evaluation of the available information it is concluded that the levels reported in DEIS/R are considered to be both representative of the expected range of EMF levels needed

to evaluate environmental and regulatory concerns associated with the NEC project, and are consistent with those levels presented in other similar studies.

Other Comments

The subjects associated with "Other Comments" ranged from requests for clarification of typographical errors to concerns about the 150-foot EMF study area. All "Other Comments" were responded to on a comment-by-comment basis in this volume. The response to these comments can be found at the locations described below.

FEIS/R LOCATION OF RESPONSE

The response to comments on EMF can be found in the following FEIS/R locations:

- **EMF Impacts on Children** - An additional technical study was performed to address this subject area and a report entitled *EMF Impact on Children* was prepared. Information contained in this report can be found in Volume II, Section 5.4 of the FEIS/R.
- **EMF Impacts on Workers** - An additional technical study was performed to address this subject area and a report entitled *Documentation of EMF Occupational Studies* was prepared. Information contained in this report can be found in Volume II, Section 5.5 of the FEIS/R.
- **EMF Impacts on Fish** - An additional technical study was performed to address this subject area and a report entitled *Analysis of EMF Impacts on Fish Migration* was prepared. Information contained in this report can be found in Volume II, Section 5.5 of the FEIS/R.
- **EMF Levels** - An additional technical study was performed to address this subject area and a report entitled *60 Hertz Magnetic Field Measurement Survey at the Roxbury, Massachusetts MBTA Power Substation* was prepared. Other comments regarding EMF levels and testing procedures were addressed in a document entitled, *Response to DEIS Comments Regarding Electromagnetic Field Testing*. Information contained these documents can be found in Volume II, Section 5.1 of the FEIS/R.

3.6 NOISE AND VIBRATION

The major comments about noise and vibration issues fell into four general groups: Train noise and vibration prediction methods, train noise impact criteria, mitigation of train noise and vibration impacts, and noise impact from electrical facilities

Each of these issues is summarized below. A more detailed discussion is contained in Volume I, Sections 3.4 and 4.4 of the FEIS/R.

Train Noise and Vibration Prediction Methods

Comments: Several comments questioned the validity of the train noise model and suggested that the potential benefits of new technology trains be considered in the prediction of future conditions.

Response: Existing and future train noise levels were computed using a general mathematical model of train noise that accounts for train type, speed, length, schedule and horn operation, as well as shielding attenuation and a minimal amount of excess sound attenuation due to ground and atmospheric effects. Given all the variables involved, such a model is essential to provide a consistent and valid comparison of existing and future conditions. Furthermore, the model was calibrated based on measurements of diesel and electric train equipment on the NEC, and therefore represents the best state-of-the-art method of train noise prediction for

the project. In addition to existing Amtrak electric and diesel train equipment, noise and vibration measurements were made for the Swedish *X2000* tilt train and the German *InterCity Express (ICE)* trainset during revenue service demonstration programs on the Northeast Corridor and for the *Rohr Turboliner (RTL)* in the Empire Corridor. The potential benefits of these new technology trains have been evaluated in terms of a "Best Case Build" alternative that incorporates the lower noise and vibration characteristics of these trainsets.

Reference: The train noise and vibration prediction models are described in Chapter 4 of FEIS/R Volume II, including the models developed for the *X2000*, *ICE*, and *RTL* trainsets.

Train Noise Impact Criteria

Comments: Some comments questioned the noise impact criteria and suggested the use of an absolute criterion of acceptability, with a "no net increase" policy above this level.

Response: The NEC has been actively carrying passenger and freight rail traffic for many years. Because the electrification project would involve only changes in train noise, rather than the introduction of a new source in the communities along the corridor, the noise impact criteria are based on the projected increase in cumulative noise level relative to the existing noise environment. The criteria are based on Federal noise standards and on well-documented criteria and research into human response to community noise. Consisting of a combination of absolute and relative criteria, they allow less of a noise increase in already noisy areas than in areas with lower existing noise levels. It would not be appropriate to use a rigid, absolute criterion for this project, such as the 65 dBA L_{dn} HUD standard. This standard applies to the acceptability of sites for new housing rather than to a change of conditions at existing housing. Furthermore, a "no net increase" policy in areas with noise levels in excess of 65 dBA L_{dn} is not practical since any project-related increase in train speed or frequency of operation, no matter how slight, would be deemed to cause significant noise impact along the entire project corridor.

Reference: The train noise impact criteria are presented in Section 4.4 of FEIS/R, Volume I, and additional discussion of these criteria is provided in Section 4.6 of FEIS/R, Volume II.

Mitigation of Train Noise and Vibration Impact

Comments: Several comments questioned the feasibility of potential train noise and vibration mitigation measures, and requested more specific information on where such mitigation would be provided.

Response: Due to the uncertainties in future train equipment and operations, potential train noise and vibration impacts have been re-evaluated in the FEIS/R for a range of possible conditions. These conditions range from an "Initial Build" case, assuming equipment with the lowest possible noise and vibration emissions, operating at increased speeds with no change in train lengths or schedule, to a "Worst Case Build" condition, assuming the use of existing Amtrak electric trains at increased speeds with the maximum design-year train lengths and schedules. Specific areas where mitigation could be warranted for these two cases are identified in the FEIS/R. At the outset of the project, mitigation could be considered for those locations where potential impact has been identified for the "Initial Build" case. Beyond this initial mitigation, a train noise and vibration monitoring program will be established to determine when additional mitigation is warranted. With regard to train noise impact, the installation of wayside noise barriers is likely to be the most effective mitigation measure, and is expected to provide a 5 to 10 decibel noise reduction in many areas. However, at locations where barriers would not be feasible due to aesthetic or cost effectiveness considerations, sound insulation of the affected noise-sensitive buildings could be considered as an alternate mitigation measure. With regard to train vibration impact, the installation of ballast mats beneath the track is the most promising mitigation measure, and could reduce vibration levels by 30 to 50 percent at some locations. However, a vibration test program has been recommended to evaluate the potential effectiveness of ballast mats and other vibration mitigation prior to their

installation. In cases where ballast mats would not be feasible or cost effective, other measures would be implemented.

Reference: Train noise and vibration impact mitigation is discussed in Section 5.1 of FEIS/R Volume I, and additional details are provided in Section 4.5 of FEIS/R, Volume II. The recommended monitoring and test programs are outlined in Section 4.7 of FEIS/R, Volume II.

Noise Impact from Electrical Facilities

Comments: Several comments expressed concern about noise from electrical facilities.

Response: Noise from fixed facilities associated with the electrification emanates from transformers and ventilation machinery. Potential mitigation measures include sound-absorptive barrier walls in the case of transformers and quiet fans and/or fan silencers in the case of ventilation equipment. Such measures will be incorporated into the design of these facilities as required to comply with local noise regulations applicable to these facilities.

Reference: Potential noise impacts and mitigation from electrical facilities are discussed in Sections 4.4 and 5.1, respectively, of FEIS/R, Volume I, and additional information on potential noise impact mitigation for such facilities is provided in Section 4.6 of FEIS/R, Volume II.

Other comments received included site-specific questions regarding noise and vibration impact and mitigation, as well as questions regarding possible errors in the document. Individual responses are provided in this volume.

3.7 VISUAL AND AESTHETIC IMPACTS

Comment: The majority of the commenters requested specific locations not included in the DEIS/R be analyzed, questioned why noncoastal views were not evaluated, inquired why other properties surrounding some DEIS/R impacted properties were not also listed, and questioned the number of adversely affected (Visual Modification Classification or VMC of 3 or 4) locations reported in the DEIS/R.

Response: As outlined in Section 3.11 of Volume I, two major steps, desktop analysis and field verification, were used to identify visually sensitive receptors (VSR). Desktop analysis included evaluation of U.S. Geological Survey topographic sheets and aerial photographs taken in April 1992 (scale: 1 inch = 200 feet). Two criteria were used to conservatively identify potential VSRs. It was determined that potential VSRs are those residences, restaurants, parks, and other public locations: (1) with a direct line of sight to the waterfront or other scenic view; and (2) located within approximately 1,500 feet of the right-of-way (ROW), which is the distance at which it is estimated that poles similar to those proposed for use to support the catenary are no longer significant in the view.

As a result of the desktop analysis, approximately 200 potential VSRs were initially identified in the DEIS/R and marked on maps for field verification. A consequence of the DEIS/R comment period was the identification of an additional 25 locations which were analyzed and incorporated into the FEIS/R. Most of these additional sites are included in Section 3.11 of Volume I. Those not included did not meet the criteria for VSRs.

As indicated in Section 3.11 of the DEIS/R, and reiterated in the FEIS/R, coastal views were not the only areas studied. Noncoastal views were also identified and visited to determine their significance. However, few noncoastal views qualified as VSRs, and thus were not included in Table 3.11-1. Properties with coastal views in Connecticut and Rhode Island were the predominant VSRs identified.

Although most locations listed were the only properties to qualify as VSRs, in some cases they may have been representative of directly adjacent areas; the properties listed, however, depict the worst-case scenario. For example, there is more than one property adjacent to the end of Island Road in Stonington, CT, but the view from the property analyzed would experience the greatest impact in the area given its proximity to the ROW.

Although most of the 156-mile corridor does not pass through scenic areas, many valuable vistas exist. However, given the criteria on which the evaluation was based, not all of these areas qualified as VSRs. Further, many VSRs would not be significantly impacted by the Proposed Action. Volume I, Section 4.11 of the FEIS/R provides a more detailed discussion of the visual impacts of the Proposed Action and Section 5.2 discusses the measures proposed to mitigate these impacts.

3.8 AT-GRADE HIGHWAY-- RAIL CROSSINGS

Comment: Many commenters expressed the concern that the Proposed Action would result in the elimination of some or all of the 15 existing grade crossings and that such eliminations would adversely affect access to properties between the rail line and the shoreline, and that grade separations would create their own environmental impacts.

Response: This impact is discussed in Section 4.9. No grade crossing eliminations are planned or required as part of the Proposed Action. Section 4.8 of the FEIS/R presents the results of an analysis on grade crossing safety that would result from the increased speed and frequency of trains assuming that the grade crossings are not changed. This analysis concluded that the probability of a grade crossing accident occurring anywhere on the corridor would increase from once every four years (0.284) percent to once every three years (0.307). The FEIS/R concluded that this increase would also happen if a non-electric high-speed alternative was developed for this part of the NEC.

The concerns expressed by many commenters was the result of a separate effort undertaken by FRA. Section 2 of the Amtrak Authorization and Development Act of 1992 (Pub. L. No.102-533) directed FRA to develop a plan for the elimination of the remaining 15 grade crossings on the Northeast Corridor unless such eliminations were found to be impracticable or unnecessary.

The draft of this plan, which developed plans to eliminate most of the crossings, created substantial local controversy when presented to the public for comment. Many people residing between the rail line and the shore line were concerned that access to their residences would be eliminated. Others were concerned over the potential loss of access to recreational resources of the shoreline, the environmental and aesthetic impact of constructing highway rail grade separations and many other issues. FRA agreed to reevaluate the plan which roughly coincided with the comment period on the DEIS/R.

The final grade crossing plan is contained in the Northeast Corridor Transportation Plan that was provided to the Congress in July 1994 and is described in Section 4.8 of Volume I of the FEIS/R. This revised plan recommends elimination of five crossings where there is more or less consensus on the desirability of the elimination. The remainder of the crossings are to await the results of a joint ConnDOT/FRA demonstration of advanced grade crossing protection at School Street in Groton which is funded, in part, by FRA's high-speed rail technology demonstration program. This form of protection is promising. If successful, most of the remaining crossings may not require separation.

The statute requiring FRA to develop the grade crossing elimination plan did not authorize or provide funds to FRA to implement the plan. Under NECIP, the States are responsible for elimination of public grade crossings. As a consequence, it is the States decision whether and when to implement the plan. If a state does choose to proceed with part or all of the plan, such decisions are made consistent with state law. Decisions on elimination of these grade crossings are separate and distinct from the extension of electric traction over the NEC main line, which is the subject of this EIS/R. As a consequence, the impacts of elimination of these crossings are not

discussed in this EIS. If Federal-aid highway or other Federal funds are proposed to be used then the states would be required to undertake appropriate reviews under the National Environmental Policy Act.

3.9 PROJECTIONS OF RAIL RIDERSHIP

Comment: Several people question the empirical basis for the DEIS/R's assertion that a 3-hour trip time for rail from Boston to New York would result in a 40 percent diversion from air to rail.

Response: The forecast diversion from air to rail under the "Build" alternative represents approximately 34% of total Boston-New York air travel predicted to occur during year 2010 under the "No Build" alternative. Improved rail service is projected to divert an even larger share of Providence-New York air travel forecast to occur during 2010 under the "No Build" alternative. The majority (nearly two-thirds) of this projected diversion represents business travelers who would otherwise have used air shuttle flights, but who are instead diverted to the three-hour high-speed rail service. Diversion of business and non-business air travelers to conventional rail service operating between Boston and New York is also forecast to be substantial if the "Build" alternative is implemented.

These diversions are projected using statistical models that explicitly incorporate door-to-door travel time (including access time to rail stations or airports as well as running or flying time), service frequency, and door-to-door travel cost, of which the fare charged for the line-haul portion of the trip is one component. These models have been carefully "calibrated" to empirical data that reflect both actual experience with travelers' expressed attitudes toward the use of high-speed rail service, including cities within the Northeast Corridor that already receive such service. Although the forecasts produced by these models are statistical estimates that are unavoidably subject to some uncertainty, they nevertheless represent planners' best estimates of the diversions from air and highway travel that would result from the improvement in rail service facilitated by the Proposed Action.

These predicted effects are also plausible when viewed in light of the door-to-door trip time, fare, and frequency comparisons between air shuttle service and rail travel in the Boston-New York corridor that will result from implementing the "Build" alternative. Three-hour rail service between Boston and New York will result in door-to-door rail travel times for many trips that are reasonably comparable to those for airline travel, partly because high-speed rail is planned to serve three stations within the Boston metropolitan area and five within the New York area. In addition, the frequency of train service under the "Build" alternative is projected to approach the hourly departure schedule maintained by Boston-New York air shuttle operators, at least during the morning and evening peak travel periods. At the same time, Boston-New York rail fares--projected by Amtrak to be \$50 each way for conventional train service and \$80 each way for high-speed service (expressed in today's dollars)--are likely to remain substantially below those charged for air shuttle service which now average over \$100 each way.

In addition, the projected diversion of Boston-New York air travel to the improved rail service is consistent with travel patterns now observed in the New York-Washington portion of the Northeast Corridor, where high-speed rail service presently operates. Amtrak presently reports that its Metroliner and conventional services together carry over 40% of trips having their origins or destinations located in downtown New York or Washington areas, and even larger shares of trips to intermediate points such as Philadelphia and Baltimore. These model shares are obtained with rail travel times between New York's Pennsylvania Station and Washington's Union Station that range from two-and-one-half to three-and-one-half hours. Again, when viewed in this light, the diversions from air travel projected to result from the three-hour Boston-New York rail service enabled by implementing the Proposed Action seem quite plausible.

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Old Lyme Planning Commission

CT 1-1.1

Comment: Public/Passenger safety [at Point of Woods] were ignored.

Response: *Public safety issues associated with the Proposed Project are discussed in Volume I, Section 4.8 of the FEIS/R.*

CT 1-1.2

Comment: Most problems in Town are at railroad crossings. By separating the issues, electrification and fencing/crossing into separate issues and reports the FRA has conveniently avoided the total issue.

Response: *No concrete proposal currently exists for closing the at-grade crossings. Accordingly, environmental issues associated with grade crossing closings are not ripe for review under the National Environmental Policy Act, either as a part of this electrification EIS or as part of a separate document. When, and if, a concrete, funded proposal is put forward, appropriate environmental analysis can be undertaken at that time. The impact to public safety due to pedestrian crossings of the railroad right-of-way and appropriate fencing plans are discussed in section 4.8 of the EIS/R. Also see Response 3.8 in the beginning of this volume.*

CT 1-1.3

Comment: The impacts on property values, river access, local taxes, the economy and local businesses has been understated. The railroad continues to increase impacts on the shoreline without consideration for the public and are even creating new and expanding existing problems.

Response: *Volume I, Section 4.2 of the FEIS/R discusses potential impacts to property values and municipal tax revenues. Impacts to marine traffic and river access are discussed in Sections 4.2 and 4.9. Associated mitigation is discussed in Volume I, Section 5.1 of the FEIS/R.*

CT 1-1.4

Comment: Drainage along the tracks has and continues to be a problem. Improvement to the rail system and planned

construction can only increase this problem.

Response: *The scope of this FEIS/R is the extension of electric traction from New Haven to Boston. FRA has concluded that implementation of this project would not affect the existing drainage problems or the potential for flooding along the right-of-way and therefore correction of such problems is not addressed as part of this FEIS/R. The NECTP includes a number of projects, such as addressing drainage along the right-of-way under the general heading of recapitalization of the NEC infrastructure. In addition, Amtrak is responsible for the normal maintenance of drainage structures under its tracks. Specific problems should be addressed to Amtrak. The appropriate point of contact is:*

*David Carol
Amtrak
Saybrook Junction Marketplace
455 Boston Post Road
Old Saybrook, CT 06475
(203) 395-3004*

CT 1-1.5

Comment: No discussions were held with the Town and residents on the previously presented issues. If discussions were held, they were with specific individuals and as noted several times the public, businesses and some Towns are unaware of what is proposed. Those evaluating the proposed electrification plan clearly evaluated issues as they related to the railroad - not the public.

Response: *As described in Appendix C of the DEIS/R, public meetings were held in Old Saybrook, Madison, and Stonington, Connecticut on November 17, 18, and 19, 1992, respectively. In addition, public meetings were held in several locations in Rhode Island and Massachusetts. Notice of these meetings was published in 38 local newspapers and sent to local radio and cable television stations. Notices were also posted in many public buildings along the NEC. A follow up meeting was held in Stonington, CT in April 1993 at the request of the November meeting participants. In addition to these public*

meetings, formal public hearings were held in November 1993 in Old Saybrook and New London as part of the public comment period on the DEIS/R. Separately and unrelated to the EIS/R, a number of public meetings were held by FRA regarding the grade crossing elimination plan.

CT 1-1.6

Comment: Alternate rail equipment and other potential route evaluations are very shallow and should be the subject of an in depth review.

Response: *The discussion of technology and route alternatives have been expanded in the FEIS/R. Specifically, technology alternatives are discussed in Volume I, Sections 2.2.2, 2.2.3, 2.3.2, 2.4.1 and carried forward into Chapter 4 in the context of the FF-125 and FRA-150 scenarios. Route alternatives are discussed in Volume I, Section 2.2.4. Also see Responses 3.1 and 3.2.*

CT 1-1.7

Comment: If only the metropolitan areas, Boston and New York, benefit from the improvements why continue to spoil the shoreline?

Response: *The impacts of this project, both beneficial and adverse, are detailed in Volume I, Chapter 4. With specific regard to benefits along the Connecticut coast, there will be high-speed rail access to major urban areas from New Haven and New London by Amtrak express trains. In addition, there will be a substantial improvement in the conventional Amtrak service that serves additional communities along the Connecticut coast. The improved rail service and resulting diversion of travellers from less efficient modes will result in regional air quality and energy benefits.*

Rep. Robert R. Simmons

CT 1-2.1

Comment: In no case is train speed the overriding service amenity. Yet, when I examine this project, it seems to be weighted in favor of speed over all other service-

related criteria. This is a fundamental flaw in the proposal. Trains are not planes! We do not want to fly down the tracks.

Response: *As discussed in Volume I, Section 4.9 of the FEIS/R, the main reasons for modal choice (train over air or auto), are time and cost. However, as older rolling stock and other equipment in use in the Northeast Corridor is replaced, service amenities will continue to improve.*

CT 1-2.2

Comment: Quite frankly, I do not share Amtrak's belief. I am not convinced that people will give up on car and air travel just because of train speed. There is always a freedom that goes with driving your own car, not to mention the relatively low cost of operating a car.

Response: *Comment noted.*

CT 1-2.3

Comment: Delay in New Haven: Another portion of the report states that electrification will eliminate the "dual traction system" requiring a 10-20 minute delay of changing engines in New Haven. My experience is that north bound trains are "broken" in New Haven to allow some cars to use the shoreline route to Boston and others to go to Hartford. South bound trains are likewise "joined" in New Haven. If this practice continues, there will continue to be delays in New Haven, even with a single traction system.

Response: *Upon completion of this project, trains presently traveling between Boston and New York City via Springfield and Hartford will terminate at New Haven, where passengers will transfer to trains operating between Boston and New York City over the Shore Line.*

CT 1-2.4

Comment: Alternatives: Early in the report, we are told that "four types of alternatives to electrification were evaluated and subsequently eliminated." My own view is that insufficient time and space was devoted to these alternatives.

Response: See response to Comment CT 1-1.6.

CT 1-2.5

Comment: Clearly, the Amtrak electrification project places our tourist trade at risk because of the catenary system associated with it and the fact that much of our water traffic is dependent on frequent bridge openings and closings. It would be a sad irony if this project diminished our tourist and water recreation industry while at the same time, degrading the local environment and the physical well-being of our people.

Response: *The potential impact of the Proposed Project on tourism and marine traffic is discussed in Volume I, Section 4.2 of the FEIS/R. With regard to impacts on tourism of the catenary, the proposed catenary will not be significantly different in scale from the railroad signal pole line that has been part of the scenery of the Connecticut coasts for nearly a century and which will be removed as part of a separate NECIP project. The visual impacts of the catenary are specifically addressed in Volume I, Section 4.11. With regard to marine traffic through the five moveable bridges, discussions with the Coast Guard indicate that adequate access for both rail and marine traffic is possible with appropriate planning. Section 5.1.1(i) includes as mitigation of this proposed project, a requirement that Amtrak develop an operating plan acceptable to the Coast Guard that provides necessary marine access through these bridges. See Response 3.4 in the beginning of this volume.*

CT 1-2.6

Comment: Closing At-Grade Crossings: Another consideration that is important to me related to at-grade crossings. Earlier this year we were told that Amtrak was considering closing six at-grade crossings in the Town of Stonington. To my knowledge, this represents the largest set of closings in any town between Boston and New York. Two of these affect my constituents who use the Walker's Dock and Freeman's crossings.

Response: No grade crossing eliminations are

planned or required as part of the Proposed Action. This concern is the result of a separate effort undertaken by FRA. Section 2 of the Amtrak Authorization and Development Act of 1992 directed FRA to develop a plan for the elimination of the remaining 15 grade crossings on the Northeast Corridor unless such eliminations were found to be impracticable or unnecessary. See Response 3.8 in the beginning of this volume.

CT 1-2.7

Comment: The bottom line for local residents is clear. We suffer all of the adverse impacts and we get no benefits. On this basis, I cannot support the project as proposed.

Response: See response to Comment CT 1-1.7.

CT 1-2.8

Comment: Southeastern Connecticut is already plagued with economic recession and regional job loss. Any reduction of freight rail deliveries due to electrification promises to aggravate this situation and is unacceptable consequences of this project.

Response: *Volume I, Sections 4.2 and 4.9 of the FEIS/R discuss potential impacts to freight rail operations and associated mitigation. Also see Response 3.3 in the beginning of this volume.*

CT 1-2.9

Comment: Maintenance and repair: Just last week I went to one of the Stonington Harbor bridges and, with my fingers, flaked off large pieces of steel which have been rusting over the years. I believe that high speed trains will shake these bridges apart; we are better off investing in maintenance and repair than in high speed trains and overhead electrification.

Response: *The bridges on the NEC main line have been and will be replaced as needed as part of NECIP or ongoing maintenance programs sponsored by State departments of transportation in areas where the NEC main line is owned by the State. Amtrak inspects the structural condition of its*

bridges annually with quarterly inspections of moveable bridges and makes any needed repairs.

Most of the bridges on the NEC main line were designed during the steam era of railroading when this rail line carried substantially more freight than it now does. As a consequence, the bridges were designed for loads far greater than they are subjected to now or will be subjected to for the foreseeable future. This additional strength permits continued safe operation of trains even if the bridges superficially appear to need repair. See Overview of Railroad Bridges and Assessment of Methods to Monitor Railroad Bridge Integrity, USDOT, Federal Railroad Administration, June 23, 1994.

CT 1-2.10

Comment: I hereby request that a hearing period be held open an additional 90 days to March 1, 1994, so that all of these matters can be addressed.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

U.S. Rep. Sam Gejdenson

CT 1-3.1

Comment: First of all, I request that the period for public comment be extended for 90 days. Many state agencies and area residents have not had enough time to study the DEIS completely and would appreciate the additional three months.

Response: *Based on this and similar comments, the MEPA and NEPA comment periods were extended six and seven weeks, respectively, to January 21, 1994.*

CT 1-3.2

Comment: Since there has been significant controversy over [effects of EMFs] in the scientific and medical communities, I urge you to study this issue further before the final DEIS is released.

Response: *Volume I, Section 4.5 of the FEIS/R discusses EMF and potential impacts*

resulting from the project Also see Response 3.5 in this volume.

CT 1-3.3

Comment: The report is very vague on details on how these negative impacts [noise and vibrations] are going to be mitigated and I urge you to explore methods which minimize noise and vibrations.

Response: *Volume I, Section 5.1.1(d) of the FEIS/R discusses potential noise and vibration impacts and mitigation. A summary of this section is included at the beginning of Volume III.*

CT 1-3.4

Comment: I would again like to emphasize my previous request that an alternative route for high speed rail be fully explored.

Response: *The discussion of route alternatives has been expanded in Volume I, Section 2.2.4 of the FEIS/R. Also see Response 3.1 in this volume.*

CT 1-3.5

Comment: As one of the goals of the improvement project is to relieve traffic congestion on Interstate 95, Southeastern Connecticut will not benefit measurably unless some of the high speed trains stop in New London. This region is the number one tourist destination in the state with a substantial increase in traffic in 1993 due to the opening of Foxwoods Casino and to a concerted marketing effort during this past year. Several additional stops in New London are imperative if these improvements are to benefit this region.

Response: *Amtrak indicates that it plans to have a two to three of its daily express train round trips stop at New LoYork City to Boston trip times being reduced by 25% from the present five hours to 3:45. Most of these trains will stop at Nndon. To the extent that there is a growing demand for service at that location, additional trains will stop there. In addition, the conventional train service will improve significantly with New ew London.*

CT 1-3.6

Comment: A major concern which is not considered

in the DEIS is that of movable bridges which must be raised to accommodate boat traffic. It must be clarified how access will be maintained for commercial and recreational boater as well as the U.S. Navy.

Response: *The FEIS/R (Volume I, sections 4.2 and 4.9) includes an expanded discussion on the potential impacts that could occur if adequate measures are not incorporated into the project to ensure marine access through the five moveable bridges operated by Amtrak. Discussions with the Coast Guard indicate that adequate access for both rail and marine traffic is possible with appropriate planning. Section 5.1.1(i) includes as mitigation of this proposed project, a requirement that Amtrak develop an operating plan acceptable to the Coast Guard that provides necessary marine access through these bridges. Also see response 3.4.*

CT 1-3.7

Comment: I am also concerned that current and expected freight service in Connecticut will not be accommodated sufficiently.

Response: *The FEIS/R (Volume I, sections 4.2 and 4.9) includes an expanded discussion on the potential impacts that could occur if adequate measures are not incorporated into the project to ensure that freight rail service is preserved. Section 5.1.1(i) identifies the mitigation incorporated into this project to avoid any significant impact on freight operations as a result of this project. Also see response 3.3.*

CT 1-3.8

Comment: Since the State of Connecticut makes significant annual investments to improve Metro-North and Shoreline East commuter rail lines, and their services are used extensively by shoreline residents, I hope that there also will be appropriate operating windows for the state's commuter needs.

Response: *The mitigation measures identified in Section 5.1.1(i) also would avoid significant impacts on commuter service resulting from this project. The Northeast*

Corridor Transportation Plan (NECTP) includes additional capacity improvements that will permit the NEC main line to accommodate the growth projected by all rail users of this line including Amtrak, the commuter railroads and the freight railroads.

CT 1-3.9

Comment: After further review of the Old Lyme crossing, it has come to my attention that the construction of a tunnel is the most desirable solution for improved safety. An emergency egress must then be provided for the residents of the Point O' Woods community.

Response: *No grade crossing eliminations are planned or required as part of the Proposed Action. This concern is the result of a separate effort undertaken by FRA. Section 2 of the Amtrak Authorization and Development Act of 1992 directed FRA to develop a plan for the elimination of the remaining 15 grade crossings on the Northeast Corridor unless such eliminations were found to be impracticable or unnecessary. The final plan prepared by FRA and published in July of 1994 addresses these specific issues. It should be noted, however, that in directing FRA to prepare this plan, Congress did not provide FRA authority to implement it. Consistent with prior practice on NECIP, decisions on improvement or elimination of public grade crossings will be made by the appropriate State agencies under State law. Also see Response 3.8 in this volume.*

CT 1-3.10

Comment: One specific problem which has been brought to my attention is the taking of the parking lot at Esker Point for a paralleling station. This is next to a town beach, one of the very few public beaches in the entire town.

Response: *An alternative location for the Noank paralleling station has been found. Volume II, Chapter 1 of the FEIS/R discusses the proposed location of the Noank paralleling station. This site can be found in Volume I, Appendix A.*

CT 1-3.11

Comment: Additionally, there has been considerable discussions about the new state-of-the-art turbo train. The DEIS dismisses consideration of this technology in a most cursory fashion.

Response: *A revised discussion of the alternate technologies to electrification and attendant environmental impacts is presented in Volume I, Sections 2.2 and 2.3 of the FEIS/R. Also see Response 3.2 in this volume.*

Town of Waterford

CT 1-4.1

Comment: As indicated in the 1978 PEIS, and page 1-7 of the DEIS, the Niantic River Bridge has been identified as being in need of replacement. The DEIS does not address this need or indicate what effect the placement of the Catenary System and walkways proposed for the bridge will have on the integrity and operational characteristics of this structure.

Response: *The installation of catenary on the Niantic Bridge will have no effect on its operation or structural integrity. Replacement of this bridge has been included in the NECTP.*

CT 1-4.2

Comment: Nowhere in the DEIS have the economic impacts of the reduction in frequency or duration of bridge openings been considered, specifically on the Waterfront Development area referred to as Mago Point.

Response: *Potential impacts to marine traffic and associated mitigation are discussed in Volume I, Section 4.2 of the FEIS/R. Also see Response 3.4 in the beginning of this volume.*

CT 1-4.3

Comment: The description of the installation of the electrical lines under the Niantic River at the Niantic River Railroad Bridge has not been addressed in the DEIS. This was only revealed in the notification received from the Army Corps of Engineers.

Response: *Volume I, Section 4.12 of the FEIS/R discusses potential construction impacts of submarine cable placement.*

CT 1-4.4

Comment: The proposed Catenary System as shown in the DEIS is significantly different than the design presented at the scoping sessions. The aesthetic impact of these structures can and should be minimized.

Response: *The catenary design presented at the Scoping sessions was preliminary in nature and representative of the type of system the electrification would be based upon. Volume I, Section 4.11 of the FEIS/R discusses visual impacts resulting from the project.*

CT 1-4.5

Comment: The analysis in the DEIS relative to visually sensitive receptors does not take into account the impact these objects will have on views from the public rights-of-way. The CCMA puts greater importance on visual obstructions and blight impacts individual residences. A number of vistas including the view from the Niantic Bridge and its approaches will be impacted by these structures.

Response: *Throughout the project development process, the FRA and Amtrak have been coordinating with the Connecticut Historic Preservation Commission (CHPC) regarding the identification of historic resources along the ROW, their National Register eligibility, potential project effects and mitigation, pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966. FRA and CHPC, acting as the State Historic Preservation Officer have entered into a memorandum of agreement detailing potential effects on historic resources and mitigation incorporated into this project.*

CT 1-4.6

Comment: Minimizing the visual impact of these structures should involve limiting the number of wires on the poles to those necessary to convey the electrical current to the train. Consideration should be given to removing all signal and

transmission wires and placing them underground as was already proven to be feasible under the AT&T Fiber Optics project.

Response:

Amtrak's design minimizes the number of wires that will be installed on each pole (generally four wires). All signal wiring will be relocated underground. There will be no utility wires installed on the catenary poles.

CT 1-4.7

Comment:

A secondary consideration in support of installing some of the lines underground relates to maintenance and long term damage that may occur as a result of hurricanes and violent storms that presently impact the corridor.

Response:

The catenary system cannot be installed underground because the train's pantograph must make contact with the catenary system. The feeder and static wire are optimally positioned to minimize Electromagnetic Fields (EMF). Relocation of these wires underground will substantially increase the EMF fields. The static wire provides lightning protection and is a vital component in safety grounding. The effectiveness of the static wire will be substantially reduced if it were placed underground. It is recognized, however, that in certain extreme circumstances weather could damage limited segments of catenary.

CT 1-4.8

Comment:

On a related point, I would like to know if the calculations on the EMF emissions took into consideration the location of the transmission cables on the outer section of the Catenary System?

Response:

There will be no utility or signal wires installed on catenary poles. With regard to the catenary system, the estimated EMF emissions are consistent with the current design. The cable would be inside the outer edge of the electrified track and it was the outer edge of the track which was assumed for the DEIS study.

CT 1-4.9

Comment:

The pole design fails to incorporate some of the technology that has been developed that could improve the appearance of the poles. Cylindrical poles with a finished surface could be painted to, in part, lessen the difference between the pole and surrounding viewing area.

Response:

The finish chosen for the poles will be selected with the goal of blending into the background. Volume I, Section 4.11 of the FEIS/R discusses visual impacts resulting from the project.

CT 1-4.10

Comment:

Page 4-43; Jordan Cove is located in the Town of Waterford not Stonington.

Response:

This error has been corrected in the FEIS/R.

CT 1-4.11

Comment:

Page 4-34 of the DEIS incorrectly lists the Millstone Bridge as one that will remain open to one-way traffic during construction. It also incorrectly lists the estimated ADT for this bridge. We have had numerous meetings and discussions with the design professionals. The impacts on existing overhead wires at this location are also not considered.

Response:

Millstone Road West (also called Millstone Point Road) crosses the Amtrak mainline over a narrow bridge decked with wooden planks to provide access to a single residence and a locked gate into the Northeast Utilities (NEU) Millstone Point Nuclear Power Station. This bridge will be closed during construction (see Volume I, Table 3.9-6 of the FEIS/R). Amtrak will negotiate temporary access on the east side of the tracks across NEU property. The weight limit on this bridge will be raised to 9 tons to accommodate emergency apparatus. The assessment study of the Millstone Road West Bridge completed for Amtrak in 1992 by Gannett Fleming, Inc., did account for the overhead utility wires, owned by Connecticut Power & Light and Southern New England Telephone, at this location.

Table 9-12 in the DEIS/R incorrectly listed the daily traffic crossing this bridge. Given the condition of the NEU access road, the locked gate, and the single residence, the daily traffic crossing this bridge is estimated to be 10 vehicle trips. This table has been corrected in the FEIS/R.

CT 1-4.12

Comment: Another deficiency of the DEIS is the lack of any description in the wetlands section of the large palustrine forested wetland that is located on the east side of Millstone Point Road, north of the bridge, as was indicated would be done in section 11.4.7.1.

Response: *This error has been corrected in the FEIS/R.*

CT 1-4.13

Comment: How will the conveyance of land from the various utilities that own the Millstone Generating Facility occur? Are you aware of the role of the Department of Public Utilities control in the sale of any utility land? Will the installation of the station and the electrical lines impact the transmission lines from the power station? Has consideration been given to the potential access problems that could occur if there were to be an accident at the generating station? Have all the potential impacts of the paralleling station on the operation of the power plant been considered?

Response: *Amtrak stated in a June 11, 1994 letter from Richard Hill that it intends to acquire an access easement through the Millstone Generating Facility Property in lieu of acquiring land. The conveyance vehicle will be an access agreement. This will permit Amtrak to use the roads of the Facility to get to the paralleling station, which will be built on Amtrak property.*

Amtrak will work with the Millstone officials to follow all governmental requirements for obtaining this easement including those of the Department of Public Utilities. However, since no land is being acquired, the process should be considerably reduced.

The paralleling station is being designed to preclude any effect on the overhead transmission lines. The designers are coordinating their design with representatives from all involved power companies.

Amtrak is presently designing plans to adjust the Millstone Point Bridge to ensure that access will be continued to both the power facility and Amtrak' paralleling station.

As mentioned above, the designers are meeting as needed with the officials of the electric companies.

CT 1-4.14

Comment: Nowhere in the document was there a definitive statement that fencing was required as a result of the impacts associated with this project.

Response: *Fencing incorporated into this project is identified in the FEIS/R, Volume I, Section 5.1.1(h).*

CT 1-4.15

Comment: Will another EIS process be required for the fencing of the right-of-way? In addition, there was no discussion of potential wildlife impacts resulting from the increased speed and frequency of trains.

Response: *Fencing of the existing right-of-way will not require a separate EIS. Wildlife impacts are addressed in Volume I, Section 4.12 of the FEIS/R.*

CT 1-4.16

Comment: We commented on the concerns of our public safety officials regarding the increased potential for fires resulting from the installation of these electrical lines. They were also concerned about fighting fires adjacent to the rail line and the hazard of these lines would pose to fire fighters. Will the cables be shielded or unshielded?

Response: *Volume I, Section 3.8.2(c) of the FEIS/R discusses the operational safety issues surrounding the proposed action. It concludes that electrified systems are not*

significantly more prone to fires, not do they present a increased threat to firefighters, as the catenary system is de-energized prior to firefighting activity.

Neither the catenary nor the second feeder will be shielded. Since a direct contact is required between the pantograph of the train and the catenary, it cannot be shielded. However, in areas of minimal clearance, the second feeder will be shielded for safety. The fire department would notify Amtrak's power director to de-energize the catenary as part of their standard procedures for fighting fires adjacent to electrified railroads. Amtrak will be discussing fire department procedures with local fire companies.

CT 1-4.17

Comment: Any maintenance requirements for the catenary system and rail beds that would require the use of herbicides or pesticides or any other chemicals or materials of concern should be reviewed in the Final EIS/R.

Response: *Amtrak presently has a maintenance program for controlling vegetation that is approved yearly by the State of Massachusetts called the Yearly Operating Plan. This plan outlines all chemicals and methods used to control vegetation within the ROW, and is the same program used in Connecticut and Rhode Island. There are no plans to change this procedure and it is not affected by the electrification proposal.*

CT 1-4.18

Comment: Why were there not mitigation measures, such as the quad system, considered in terms of the potential to reduce the probability of accidents at existing grade crossings?

Response: *The potential for increased accidents at highway-rail grade crossings was analyzed in the FEIS/R. It was found that the increase would be small, increasing the cumulative potential for an accident from once every four years to once every three. Therefore, no mitigation was deemed necessary. Also see Response 3.8*

in the beginning of this volume.

CT 1-4.19

Comment: Noise mitigation measures listed contain no specific analysis of the costs and benefits of the measure in relation to the specific amount of noise reduction that can be expected to be achieved.

Response: *See Response 3.6 in the beginning of this volume. In addition, as discussed in Volume III, page 4-96 of the DEIS/R, the installation of 8 ft. high barrier walls along the ROW line would provide a noise reduction of about 5 dBA in terms of L_{dn} at outdoor and first-floor spaces of most sites impacted by the Proposed Action. The installation cost is estimated at \$160 per linear foot.*

CT 1-4.20

Comment: Economic impacts have not been described adequately. Amtrak has failed to consider the increased frequency of trains in their analysis. Specifically, the potential impact on the water dependent uses located in the Niantic and Thames Rivers that are at risk.

Response: *Potential impacts to marine traffic and associated mitigation are discussed in Volume I, Sections 4.2, 4.9, and 5.1 of the FEIS/R. Also see Response 3.4 in the beginning of this volume.*

CT 1-4.21

Comment: Comparing the listing of land uses adjacent to the northeast Corridor Rail Line as shown in appendix B, Page 2 to sheets 7 & 8 of Volume 2, there are many inaccuracies.

Response: *Volume II of the DEIS/R contains information provided by the agency in each state which coordinates GIS. In many cases, land use and land cover which was incorrect or outdated was amended when discovered. However, because of the extensive scope of the project area, all of the information in the 156 square mile study area could not be verified through on-site inspections. The discrepancies stated are noted.*

CT 1-4.22

Comment: The DEIS justifies the project chosen, as opposed to assisting the selection of the best alternative and technology.

Response: *Comment noted. See Response 3.2 in the beginning of this volume and ES.2 in Volume I of the FEIS.*

CT 1-4.23

Comment: If the total scope of the project is not included in the DEIS, for example the cost of replacing the Niantic River Bridge, how can the costs and benefits of each alternative be properly considered.

Response: *Route alternatives and attendant environmental impacts are discussed in Volume I, Section 2.2.4 of the FEIS/R. The cost assumptions used in the study of alternate routes is also explained in this section. Also see Response 3.1 in the beginning of this volume.*

CT 1-4.24

Comment: Amtrak and the Federal Railroad Administration have dismissed other alternative routes and technologies by limiting the project scope to what has been reviewed under the DEIS and proceeding with other portions of the project under the veil of having been approved as part of a system wide enhancement.

Response: *The basic outlines of the NECIP program and its alternatives were evaluated in the Programmatic EIS which was issued in June of 1978. Based on that PEIS, a decision was made to upgrade the Shore Line route including extension of electric traction from New Haven to Boston. Since that time, approximately \$3 billion has been expended as part of NECIP including approximately \$1.1 billion between New Haven and Boston. The scope of this FEIS/R is on the extension of electric traction from New Haven to Boston and alternatives to that proposed action. Alternative routes were reviewed to determine whether any change in condition or circumstance would indicate that there was a clearly superior alternative to completion of the upgrading the Shore Line that warranted*

a more detailed analysis. No such superior alternative was identified. (See Response 3.1 in the beginning of this volume). The FEIS/R also considered alternative technologies. (See Response 3.2 in the beginning of this volume).

New Haven City Planning Dept.

CT 1-5.1

Comment: While the Report includes extensive documentation of the impacts that the construction of substations, switching stations and paralleling stations might have on these resources, it does not address the impacts (e.g. siltation, sedimentation, and runoff of contaminants) of the installation of the electrical poles.

Response: *Volume I, Section 4.12 of the FEIS/R discusses catenary pole placement and attendant environmental impacts.*

CT 1-5.2

Comment: For example, the Report does not mention possible adverse effects that this project may have on the large wetlands in the Quinnipiac River Delta (Mile 72.6-73).

Response: *No alteration of the wetlands in the Quinnipiac River area is expected. Any work proposed for this area would be limited to catenary pole installation and will take place within the existing right-of-way. It is proposed that any work in the right-of-way adjacent to wetlands, will incorporate best management practices to control offsite impacts.*

CT 1-5.3

Comment: From an urban planning standpoint, we are concerned about the effect that the installation of protective barriers on urban street bridges may have on the fabric of the city. The rail lines already act as barriers and create a sense of separation between neighborhoods on opposite sides of the tracks. The addition of solid, eight-foot walls on both sides of these bridges will increase this perception of separation, discouraging pedestrian traffic between neighborhoods like Downtown New Haven and the historic Worcester Square (Mile 72.6-73).

Response: *Amtrak proposes barriers on over-track bridges to prevent access to the catenary. Initial designs called for solid barriers, however Amtrak is now considering alternative designs. In on historic bridges and in historic districts the actual design of these bridges will be coordinated with the State Historic Preservation Officers.*

Stonington Shellfish Commission

CT 1-6.1

Comment: Activities, such as welding and cutting, could cause lead to enter the water. This material [solvents] must not be allowed to enter the water or ground.

Response: *During all construction phases, Best Management Practices, approved by the Connecticut Department of Environmental Protection, would be implemented to safeguard against these potential impacts.*

CT 1-6.2

Comment: The clearances between the bottom of the bridge [at the head of Stonington Harbor] and the water level cannot be reduced, even a few inches without creating significant additional traffic restrictions.

Response: *The Proposed Action (electrification) does not impact the clearance between the bottom of the Stonington Harbor bridge and the water level.*

Town of Old Lyme

CT 1-7.1

Comment: The proposed modifications to the underpass at Connecticut Road in Point-O-Woods will increase overhead clearance but do nothing to eliminate an already serious flooding problem in the event of heavy rains.

Response: *See response to Comment CT 1-3.9.*

CT 1-7.2

Comment: A decision on the at-grade crossing for Chapman's Crossing should provide a solution to pedestrian access to the beach and access for large emergency and utility vehicles to the Point-O-Woods area. These steps should satisfy property owners at Oak Ridge and Point-O-

Woods.

Response: *See response to Comment CT 1-3.9.*

CT 1-7.3

Comment: It is apparent that Mile Creek is being ignored in the overall scope of the project. However, with increased development and resulting traffic, the problem at that location will only get worse. The time will never be better or the funds more available than with this project.

Response: *This underpass would not be modified as part of the Proposed Action.*

CT 1-7.4

Comment: Meanwhile, work has proceeded in a "business as usual manner" replacing track and ties as well as installing much of the necessary electrical equipment.

Response: *The scope of this EIS is limited to the extension of electric traction between New Haven and Boston. Other parts of NECIP including the installation of the new signal system and improvements to the track have been covered by prior environmental documents and these projects are under way. To date, FRA and Amtrak have invested approximately \$1.1 billion as part of NECIP in the upgrade of the Shore Line between New Haven and Boston.*

Town of Groton

CT 1-8.1

Comment: This writer was generally opposed to the project.

Response: *Comment noted.*

Mayor of Groton

CT 1-9.1

Comment: There are a number of properties that will be affected due to their location near the train tracks. Recently, one resident had their property assessment decreased due to their location near the train tracks. It is expected that other residents will also request a lower assessment when the Town Board of Tax Review meets in early 1994. This will translate into lost revenues for the Town.

Response: *As part of this study, assessors in several towns along the NEC were contacted. All reported that the electrification of the railroad would not affect the assessment value of the homes.*

CT 1-9.2

Comment: The existing coastal route has numerous curves and sensitive tidal areas and it is not clear that the incremental time decrease associated with the coastal route will encourage greater train ridership.

Response: *Volume I, Section 4.9 of the FEIS/R provides a discussion regarding changes predicted in ridership based on a reduction in travel time. Also see Response 3.9 in the beginning of this volume.*

CT 1-9.3

Comment: The draft EIS seems to indicate that alternative routes were reviewed, however, a longer term solution for high speed rail would make more sense if the route was more direct (inland). Although it may end up costing more in the short run, a direct route makes more sense in terms of longer range high speed rail goals.

Response: *Due to the extremely high cost and significant environmental and socioeconomic costs of an inland route, it was deemed less desirable than the existing (shoreline) right-of-way. Route alternatives and attendant environmental impacts are discussed in Volume I, Section 2.2 of the FEIS/R. Also see Response 3.1 in the beginning of this volume.*

CT 1-9.4

Comment: The reduction in the number of freight trains that will be able to run is also a concern. Diversification and economic development are vital to developing the economy in Southeastern Connecticut.

Response: *See response to Comment CT 1-3.7.*

CT 1-9.5

Comment: The train whistle decibel level, vibrations, and the increased frequency of trains are concerns of Groton residents. The

increase in the number of train trips will have a drastic impact on property owners living near the tracks as train whistle blowing and vibration will increase.

Response: *Volume I, Section 4.4 and 5.1 of the FEIS/R discusses potential noise and vibration impacts and mitigation. Also see Response 3.6 in the beginning of this volume.*

CT 1-9.6

Comment: The potential impact of EMFs are also of concern to Groton residents. The report "Evaluation of the Potential Carcinogenicity of the Electro Magnetic Fields" published in October 1990 by the EPA, seems to suggest that electromagnetic fields may have a potentially hazardous affect on human beings. This potential affect should be studied in greater depth.

Response: *Volumes I and III of the DEIS/R discusses EMF and potential impacts resulting from the project. A detailed assessment of existing studies and research on potential health effects of magnetic field exposures is presented in Section 5.2 of Volume III. The discussion of EMF has been expanded in the FEIS/R. Volume I, Sections 3.5 and 4.5.*

The draft EPA report (1990) cited by the commenter addresses only the potential carcinogenicity of EMF, and has not been released to date in final form. The scientific research on cancer is addressed in Volume III Section 5.2 of the DEIS/R. More detailed discussion of this scientific research, and the reviews of the research studies by different groups of scientists, can be found in the additional studies, Documentation of Occupational Studies of EMF, and Analysis of EMF Impacts on Children, presented in Volume II, Sections 5.4 and 5.5 of the FEIS/R. Also see Response 3.5 in the beginning of this volume.

CT 1-9.7

Comment: The potential impact on commercial, tourist and federal marine traffic in both the Thames and Mystic Rivers due to

bridge openings and closings is also a concern.

Response: *See response to Comment CT 1-3.6.*

CT 1-9.8

Comment: Noank Paralleling Station - The Town is concerned about the impact this station will have on both the use of Esker Point Beach parking lot and the view from the adjacent residential homes.

Response: *An alternative site for the Noank paralleling station has been selected that will not impact on the beach or parking lot. This site can be found in Volume I, Appendix A of the FEIS/R.*

CT 1-9.9

Comment: Depending upon the actual location, size, and height of the proposed paralleling station, additional residences could have their views of Palmer (not Jordan as listed in the EIS) Cove and Fishers Island Sound impacted.

Response: *See the response to CT 1-9.8.*

CT 1-9.10

Comment: The Town has requested and hereby repeats its request to have provided to the Town a preliminary site plan of the station and its fenced area in order to further evaluate the impacts this proposed paralleling station will have in Groton.

Response: *The information regarding the revised location of the Noank Paralleling Station is contained in Volume I, Appendix A of the FEIS/R.*

CT 1-9.11

Comment: While the Town of Groton is very concerned with the public safety issue associated with illegal pedestrian crossings, it is also desirous of seeing some means of controlled and safe pedestrian access between these two state open spaces provided. There is currently an old cattle crossing under the tracks at the end of Neptune Drive in the Mumford Cove Subdivision of Groton. The Town recommends that this be studied for improvement and that formalized paths be provided and identified within the

railroad right-of-way to allow the cross pedestrian traffic referenced above.

Response: *A mitigation requirement to this effect has been included in Section 5.1.1(h) of the FEIS/R.*

CT 1-9.12

Comment: The Town is concerned that there may be additional views impacted by the electrification other than those listed in the draft EIS. It appears that properties at the end of Cedar Road, along Elm Street and Cove Lane will have their views impacted by the installation of catenary supports and wires.

Response: *Volume I, Section 4.11 of the FEIS/R presents a modified list of properties with potential visual impacts resulting from the project.*

Town of E. Lyme-Conservation Commission.

CT 1-10.1

Comment: The resulting DEIS evaluates only those alternatives and environmental impacts that are perceived by the FRA as viable and critical to the project's implementation.

Response: *See responses to Comments CT 1-1.6 and CT 1-4.24*

CT 1-10.2

Comment: Mitigation was not addressed in many cases and it was assumed that the towns within the region would have to absorb the impact. In addition to the wide ranging impact to the Connecticut shoreline's socio-economic and natural resources, there are a number of impacts to the Town of East Lyme.

Response: *Volume I, Chapter 5 of the FEIS/R has been revised to include a more detailed discussion of mitigation to identified impacts.*

CT 1-10.3

Comment: It was not identified within Vol.1 of the report how the noise and vibration associated with the improvements would be mitigated.

Response: *Volume I, Section 5.1.1(d) of the FEIS/R*

discusses potential noise and vibration impacts and mitigation. Also see Response 3.6 in the beginning of this volume.

CT 1-10.4

Comment: The impact on and mitigation [from EMFs] on individual towns was not addressed within the report.

Response: *Volume I, Section 4.4 of the FEIS/R discusses EMF and potential impacts resulting from the project. Also see Response 3.5 in the beginning of this volume.*

CT 1-10.5

Comment: The existing fencing along Route 156 near the beach has deterred pedestrians from crossing the track, but improved fencing, better signage, and an enhanced entrance near the railroad bridge for the proper access to the beach would substantially reduce problems in this area.

Response: *Mitigation such as additional fencing in these locations and other methods of deterrence such as education are addressed in Volume I, Section 5.1.*

CT 1-10.6

Comment: Although the installation of catenary poles was identified as having a negative impact on the scenic view in Noank and Stonington, the impact on views of Niantic Bay was not identified within the report. Mitigation for these residences was not discussed.

Response: *See Response 3.7 in the beginning of this volume.*

CT 1-10.7

Comment: Although it was not identified within the report, mitigation could include an alternate route, another electrification system or placing the existing utility lines underground so that if necessary, the catenary would present the only obstruction to the view from the village.

Response: *Route alternatives and attendant environmental impacts are discussed in Volume I, Section 2.2 of the FEIS/R. Alternate technologies to electrification*

and attendant environmental impacts are also discussed in Volume I, Section 2.2 of the FEIS/R. Summaries of these sections are included at the beginning of this Volume. The existing rail signal pole line is being placed underground as part of another NECIP project so that the catenary will be the only rail feature in these views extending above the roadbed. The catenary wires cannot be placed underground because the trains draw the power from the pantographs on the roof of the train. No modern high speed rail systems are known to exist that draw power from underground wires.

CT 1-10.8

Comment: The ability of the Niantic Bridge to open for commercial and recreational boating would decrease. This will have a substantial negative impact on the commercial fishing and recreational boating trade in Niantic and Waterford. This impact or issues of mitigation were not addressed within the report.

Response: *See Response 3.4 in the beginning of this volume.*

CT 1-10.9

Comment: Although the impact on freight service was identified as a regional impact, it was not specifically discussed in a town by town basis. It is expected that the accessibility of freight service will be impacted. The increased frequency of passenger service will reduce the time available for freight movement. This impact could potentially affect industry within Niantic, specifically New London Tape Distributors and the Hermitage Corporation.

Response: *See Response 3.3 in the beginning of this volume.*

CT 1-10.10

Comment: On a macro scale, the rationalization for the electrification to the Northeast Corridor is flawed. The justification that the decreased travel time between New York and Boston will pull travelers from the major interstates and airports and, therefore, decrease volatile organic compounds and other pollutants should

be seriously questioned.

Response: *Volume I, Section 4.9 of the FEIS/R presents a discussion of the predicted changes in ridership based on a reduction in travel time. This information is summarized at the beginning of Volume III. The air quality benefits of this diversion are presented in Volume I, Section 4.10 of the FEIS/R. Also see Response 3.9 in the beginning of this volume.*

CT 1-10.11

Comment: Improving air quality within the northeast by increasing local service through the addition of new tracks and stations throughout Connecticut, Rhode Island, and Massachusetts, thereby enhancing commuter, local, and express service. By promoting ridership through local rail mass transit as an alternative to automobiles, they would provide increased ridership on local and ultimately express trains. Otherwise, the net change in auto traffic and the resulting air quality will be zero based on the DEIS projections.

Response: *Substantial effort by State agencies and others is underway in Connecticut, Rhode Island, and Massachusetts to increase transit ridership on a variety of modes for commuting and for access to Amtrak train service within the Northeast Corridor.*

CT 1-10.12

Comment: Improving an alternate route such as construction of a parallel electrified express track on the Interstate 95 corridor or improvements of the New Haven, Hartford, Worcester line, both of which would have potentially less impact than the proposed electrification. If a substantial amount of money is projected to be spent on the proposed electrification for the long range improvement of the northeast rail system, it would seem prudent to spend the extra dollars to make sure that the electrification and the northeast network does not become obsolete by the year 2010. An alternative route might also reduce travel time due to increased speeds.

Response: *See Response 3.1 in the beginning of this volume.*

Old Lyme Planning Commission

CT 1-11.1

Comment: To upgrade the rail system as currently planned and to even provide for the future expansion without addressing and resolving these problems [flooding] is unacceptable and irresponsible.

Response: *See response to Comment CT 1-1.4.*

CT 1-11.2

Comment: If a high-speed rail system is successful, population growth due to improved metropolitan accessibility is anticipated thereby increasing a demand for land and overtaxing current systems.

Response: *The project is unlikely to have a significant effect on overall population growth within the corridor, because it primarily influences mobility between existing corridor population centers. Further, it is unlikely to influence the geographic distribution of population within the corridor, since commuter rail service connecting major corridor cities with their surrounding suburbs is already so extensive, rapid, and frequent.*

CT 1-11.3

Comment: Increased noise and vibration currently experienced with concrete ties, potential train noise due to higher speed or increased traffic, loss of aesthetics due to electrification, potential fencing, etc., are also problems which need to be addressed and most importantly resolved.

Response: *These issues are addressed in Volume I, Chapter 4 of the FEIS/R. Mitigation of these impacts is discussed in Sections 5.1 and 5.2.*

CT 1-11.4

Comment: If land overpasses are to be modified for a variety of issues, waterways should also be corrected and improved.

Response: *See response to Comment CT 1-11.1.*

CT 1-11.5

Comment: The road beds must be raised to eliminate

the flooding and the tracks must be significantly raised to provide proper height for safety vehicles and normal traffic. The road beds must also be widened for safety.

Response: *See Responses CT 1-3.8 and 3.9 in this volume.*

CT 1-11.6

Comment: It is preferred that the crossing (Chapman's crossing) not be modified or fenced given its excellent safety record and the minimal speed increase anticipated by Amtrak due to rail conditions.

Response: *See response to Comment CT 1-11.5.*

CT 1-11.7

Comment: The rail bed [at Buttonball Road] must be lowered.

Response: *As indicated in Volume I, Table 2.4-3, undercutting at this location would occur.*

CT 1-11.8

Comment: Solutions must be provided for Four Mile River, Three Mile River, Armstrong Brook, and Swann Brook areas. All drainage pipes under the tracks should be upgraded and improved to eliminate flooding and bridge abutments should be widened to provide proper flows.

Response: *See response to Comment CT 1-1.4.*

Town of Branford-Selectmen

CT 1-12.1

Comment: The Town of Branford, CT requests a 90 day extension for comment.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

City of New London

CT 1-13.1

Comment: There appears to be an inconsistency regarding the proposed location of the power line from the NU substation on Williams Street to the proposed substation. As previously identified, we are concerned about the possible expansion of this substation and potential

impacts from EMFs.

Response: *The inconsistency has been corrected in the FEIS/R. There is no foreseeable need to expand this substation. EMF impacts are discussed in Volume I, Section 4.5 of the FEIS/R. See also Response 3.5 in the beginning of this Volume. With regards to the concern that the proposed utility feeder would be located near a school, the route indicated in the DEIS/R has been relocated in order to avoid this situation.*

CT 1-13.2

Comment: Volume I of your statement/report includes mapping of land use and potentially sensitive receptors. My staff has advised that this information is not terribly accurate and fails to identify a number of potentially affected sites along the electrification route. The map lacks specificity and it is impossible to identify the potentially affected sites. You have failed to identify some historic sites, districts, land uses, office complexes, streets, etc.

Response: *The list of potentially sensitive receptors has been revised in the FEIS/R.*

CT 1-13.3

Comment: Your study estimates that there are only 10 vibration-sensitive sites within the vibration impact zone in New London. Given the density of development along the New London Corridor we feel that this estimate is well below the realistic number of sensitive sites in the City. In addition, it is difficult to assess these impacts since your study does not identify the specific mitigation measures proposed for the corridor, without this information we cannot evaluate the adequacy of your mitigation proposals.

Response: *Volume I, Sections 4.4 and 5.1.1(d) of the FEIS/R discuss potential noise and vibration impacts and mitigation. Also see Response 3.6 in the beginning of this volume.*

CT 1-13.4

Comment: Your study estimates that there are only 4 noise sensitive sites within the noise

impact zone in the City. Once again, given the density characteristics of development along the New London Corridor we feel that you have failed to accurately identify the true number of noise sensitive sites in the City. In addition, it is impossible to assess these impacts since your study does not specifically identify all of the sensitive sites nor the specific proposed mitigation measures or their locations.

Response: *During preparation of the FEIS/R, potential train noise impacts were re-evaluated for a range of conditions. These conditions range from an "Initial Build" case, assuming equipment with the lowest possible noise and vibration emissions, operating at increased speeds with no change in train lengths or schedule, to a "Worst Case Build" condition, assuming the use of existing Amtrak electric trains at increased speeds with the maximum forecast train lengths and schedules. As summarized in Section 4.4 of the FEIS/R, significant noise impact is predicted at 20 residential locations within the City of New London under the Worst Case Build condition only. If the worst case is realized three noise barriers may be needed. These barriers would range from about one-fifth to one-quarter mile in length, and would be located between Corridor Mileposts 121 and 122. However, due to the uncertainties in future train equipment and operations, it is proposed that these barriers not be installed at the outset, but be provided at a later date if periodic noise monitoring tests along the Northeast Corridor show the noise has reached threshold levels.*

CT 1-13.5

Comment: You incorrectly state that the New London Substation is located in the New London Historic District.

Response: *Agreed. The New London substation site is not located within a historic district. This revised information is reflected in the FEIS/R.*

CT 1-13.6

Comment: Your study failed to provide accident

summaries over the past 8 years and failed to note that the Governor Winthrop Boulevard crossing formerly known as the Hallam Street crossing was reconstructed in 1986 to address public safety concerns.

Response: *The statistical model used to predict safety impacts at railroad crossing does not require 8 years of accident data. The reconstruction of Governor Winthrop Boulevard is noted.*

CT 1-13.7

Comment: In addition, it appears that you plan to eliminate all grade crossings along the corridor by December 31, 1997 without implementing any mitigation measures. The impacts to many Waterfront and Downtown New London businesses will be severe if the crossings are modified as earlier stated in your closure plan. Since this closure plan is somewhat necessitated by the electrification project I do not see how you can avoid addressing these issues in DEIS/R. Your failure to do so is a significant omission.

Response: *See Response 3.8 in the beginning of this volume.*

CT 1-13.8

Comment: What are these projected numbers [on increased rail ridership] based on? The DEIS/R does not provide enough detail to review the accuracy of these estimates.

Response: *Ridership projections and the analytical assumptions used in making these projections are discussed in Volume I, Section 4.9 of the FEIS/R. Also see Response 3.9 in the beginning of this volume.*

CT 1-13.9

Comment: All of these factors admittedly "would place the freight railroads at a competitive disadvantage in a highly competitive market."

Response: *See Response 3.3 in the beginning of this volume.*

CT 1-13.10

Comment: Any negative impacts to freight

operations may diminish our ability for future economic development initiatives.

Response: *See Response 3.3 in the beginning of this volume.*

CT 1-13.11

Comment: The DEIS/R reports that New London's Union Station may be served by express service in the future, however, you did not include any evaluation of the station.

Response: *No impacts to New London's Union Station are predicted due to the comparatively low amount of ridership expected at this station.*

CT 1-13.12

Comment: The DEIS/R does not contain an evaluation/discussion of the impacts of the increased number of trains operating each day with the electrification project and the effects this will have upon the need to more frequently open and close the swing bridges at Shaw's Cove and the Thames River Bridge. How will boat traffic be affected by the bridge activity?

Response: *See Response 3.4 in the beginning of this volume.*

CT 1-13.13

Comment: Your DEIS/R should identify which route you plan to use for this utility line [to serve the Williams Street station]. At this point we are unsure as to your intent.

Response: *Volume I, Appendix , Figure A-26 of the FEIS/R presents the route and potential impacts of this electrical facility.*

CT 1-13.14

Comment: We have concerns about the impacts from the proposed trench excavation work. Have you considered utilizing a large scale boring machine operation which might avoid the necessity of disturbing the river bottom? We have used this technique successfully to lay cable without disrupting the pavement of the City's streets.

Response: *This method of laying the cable was considered. Although this method, known as directional drilling, has not*

been completely ruled out, it is anticipated that it could cause more environmental damage during installation of the cables. Thus, the method evaluated in the FEIS/R was deemed the preferred option.

CT 1-13.15

Comment: The DEIS/R Volume III, page 2-13 references a Visual Impact Assessment (Technical Study 11). There is no such study identified in this volume.

Response: *The visual impact assessment is contained in Volume I, Sections 3.11 and 4.11 of the DEIS/R.*

CT 1-13.16

Comment: It is our contention that there are several VSRs here in the City with views of the Waterfront, the Thames River and other scenic views which will be impacted by the electrification. Views from public roads, restaurants, marinas, parking areas, residences and businesses will be visually impacted by this proposal and are not identified in the DEIS/R. We have particular concern about visual impacts through downtown New London. Although this area is a "busy" developed urban waterfront the intrusion of additional visual obstructions to the waterfront can only serve to detract from our efforts to expand public access to our waterfront particularly the City Pier.

Response: *Volume I, Section 4.11 of the FEIS/R contains an expanded discussion of visual impacts resulting from the project. Also see Response 3.7 in the beginning of this volume.*

CT 1-13.17

Comment: I have been contacted by several concerned parties who have expressed their desire that you consent to an additional 90-day public comment period in which to review the materials provided in the DEIS/R.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended six and seven weeks, respectively, to January 21, 1994.*

CT 1-13.18

Comment: At this time I feel strongly that the potential negative impacts to the City of New London are not out weighed by the general benefits of this project.

Response: *Comment noted.*

State Senator Catherine W. Cook

CT 1-14.1

Comment: In particular, the draft environmental impact statement (EIS), was prepared without comment from the Connecticut Department of Transportation (DOT) or the Department of Environmental Protection (DEP).

Response: *Coordination with Connecticut DEP and DOT was conducted during the scoping phase of the project in 1992 and throughout the development of the DEIS/R and FEIS/R.*

CT 1-14.2

Comment: Furthermore, there were no public hearings held for the residents of the affected towns. The only opportunity for public comment was at a hearing on the proposed closures of at grade crossings, attended by over 200 people, sponsored by myself and Representative's Winkler and Simmons.

Response: *Public meetings and hearings were held during both the scoping and public comment phases of the project. Volume I, Section ES.1 of the FEIS/R provides the dates and locations of these meeting and hearings. Also see response to Comment CT 1-1.5.*

CT 1-14.3

Comment: I am also troubled by the fact that the proposed changes to the crossings at Broadway and School Street and Willow Point may pose considerable trouble for emergency services. The Chief of the Mystic Fire Department has stated their fire apparatus will have difficulty maneuvering these crossings if they are modified as proposed by the FRA.

Response: *See Response 3.8 in the beginning of this volume.*

CT 1-14.4

Comment: There are also concerns about closing Freeman's crossing, which would eliminate land access to Elihu Island for its many summer residents.

Response: *See Response 3.8 in the beginning of this volume.*

CT 1-14.5

Comment: I feel that the proposed crossing modifications in all locations should be postponed until the effectiveness of the quad system is measured.

Response: *See Response 3.8 in the beginning of this volume.*

CT 1-14.6

Comment: The proposed changes also concern me from a recreational and economic standpoint, because they are directly related.

Response: *Volume I, Section 4.2 of the FEIS/R discusses potential impacts to the economy resulting from the project.*

CT 1-14.7

Comment: The system of hundreds of thousands of utility poles as part of the catenary system will do nothing to enhance the scenic quality of Connecticut's coastline, particularly in my district which includes beautiful historic Mystic and Stonington. I am hard pressed to understand why an alternative locomotive such as the technologically advanced turbo electric trains were not considered. Such engines generate their own electricity with fuel efficiency, without poles, power lines, transfer stations, etc.

Response: *The DEIS/R does not claim that the visual effect of the catenary will enhance the scenic qualities of adjacent historic districts, only that the effect is not out of scale with the railroad signal pole line that has been part of the scenery for almost a century and is being removed as part of another NECIP project. FRA has worked with the State Historic Preservation Office to mitigate actual effects on historic districts.*

A revised discussion of the alternate technologies to electrification and attendant environmental impacts is presented in Volume I, Sections 2.2 and 2.3 of the FEIS/R. Also see Response 3.2 in this volume.

CT 1-14.8

Comment: This document before us tonight addresses only the changes to the status quo. But I maintain that the present Railroad causeways which have choked off the shellfish and fishing nurseries are considered acceptable. This condition is not acceptable. I recommend that as many track bed causeways be opened to tidal flushing as possible during construction of this project.

Response: *A recent study funded by the U.S. Army Corps of Engineers concluded that the existing railroad causeways and bridges have not significantly affected the ecology of tidal coves. (See Section 4.12 of the FEIS/R). In any event, the proposed project will not affect any under track drainage.*

CT 1-14.9

Comment: Southeastern Connecticut is now engaged in a strategic development process to identify ways to enhance our tourist industry. While mass transit and high speed rail can play an important part in bringing new tourists to the region, the scenic vistas, historic homes and shoreline access play an even more important role in extending a tourist's visit.

Response: *The impact of the Proposed Project on tourism is discussed in Volume I, Section 4.2 of the FEIS/R.*

CT 1-14.10

Comment: I believe you should go back to the drawing board regarding the relatively small gain in travel time through the curves of CT's shoreline from New London to Westerly. Rerouting may cost more now, but the potential for even greater reductions in travel time with a straighter route could increase ridership greatly over the long term.

Response: *Comment noted. Also see Response 3.1 in this Volume.*

CT 1-14.11

Comment: The conclusions and the insult to our previous scenic vistas and fragile salt marsh wetlands does not justify the slightly shortened time that may be realized during travel along the shoreline between New London and Westerly, Rhode Island.

Response: *Comment noted.*

Town of Groton

CT 1-15.1

Comment: The Town Council has requested that the Federal Railroad Administration and AMTRAK reevaluate alternative routes.

Response: *See Response 3.1 in this volume.*

Town of Groton

CT 1-16.1

Comment: This writer was generally opposed to the project because of the DEIS's inadequacy in addressing economic impact, noise and vibration impact, and alternative routes.

Response: *The response to each of these issues is summarized at the beginning of Volume III. Each summary also provides a reference to the other relevant sections of the FEIS/R.*

City of Groton

CT 1-17.1

Comment: Our concern is the significant amount of ozone that will be generated by the electric trains. The "sparking" at the wheels and overhead electrical power connections causes ozone as the electric power is transmitted at 25,000 volts to the electric motors which propel the trains.

Response: *Ozone formation does occur in the immediate area of the catenary cable and from sparking between the wheels and rails of an electric powered locomotive. The quantities of ozone formed from sparking from electric locomotives have not been measured; however, these amounts are thought to be minute. In fact, ozone resistant materials are used for the pantograph and cabling, and*

tolerances for gaps between these components are very restrictive in order to minimize corona sparking, loss of power, and ozone formation. High quality, well maintained wheels and continuous welded rails are also used to minimize sparking and loss of power.

These minuscule amounts of ozone generated in the immediate vicinity of the sparking dissipate rapidly in the ambient air, and are not sufficient to cause measurable increases in the measured ozone levels in the region. Section 4.9 of the FEIS/R discusses the significant reduction in ozone emissions that are projected for the electrification project.

CT 1-17.2

Comment: Ozone generated by the sparking across the high voltage cable supporting insulators during the predominating coastal fog should also be addressed.

Response: *See response to Comment CT 1-3.1*

CT 1-17.3

Comment: To achieve the clean air mandate for the Ozone Transport Region, other means of propulsion may be feasible such as "air-dash-pot tunnel," gas turbines, and/or a route through the less densely populated areas.

Response: *The Proposed Action is consistent with the State Implementation Plans prepared pursuant to the Clean Air Act Amendments of 1990, including meeting needed reductions in ozone.*

CT Siting Council

CT 2-1.1

Comment: In summary, in order for this project to be consistent with State law regulating the siting of electric substation and transmission line facilities, an applicant must either submit to the jurisdiction of this agency and file for a Certificate of Environmental Compatibility and Public Need, or consider the environmental effects, and alternatives of these specific facilities in sufficient detail to the exclusion of regulation by this Connecticut State agency.

Response: *Alternatives to siting of electric substations in Connecticut consistent with the requirements of the Connecticut Siting Council is included in Appendix L.*

CT DOT-BPT

CT 2-2.1

Comment This Department is quite concerned with the negative noise and vibration impacts expected to result from this project. However, we trust that, as indicated in the DEIS, these impacts can and will be mitigated to the fullest extent.

Response: *Volume I, Section 5.1.1(d) of the FEIS/R discusses noise and vibration impacts of the Proposed Action and potential mitigation.*

CT 2-2.2

Comment As a result of the high speed rail project's anticipated negative impact on rail freight service, which includes reduced windows of operating time, longer train movement times, and additional night service, the potential for severe economic impact to Connecticut exists.

Response: *See Response 3.3 in this volume.*

CT 2-2.3

Comment The FEIS for this project should address, not only the economic impact of rail freight restrictions on the users, but also the Corridor improvements (and their environmental impacts) needed to mitigate these impacts. This matter must be resolved at, or prior to, the FEIS stage of the project and must include significant input from the States of Connecticut and

Rhode Island.

Response: *The mitigation of potential impact on freight service was developed as part of the NECTP. In preparing the NECTP, FRA had extensive consultations with the affected State departments of transportation and the freight railroads. See Response CT 1-3.7.*

CT 2-2.4

Comment It was our understanding that the DEIS would address all of these issues. However, to date we have received no feedback relative to the State of Connecticut's comments regarding the draft crossing elimination plan. And, while the DEIS appears to have resolved the jurisdictional issue relative to the elimination of crossings, it has not addressed the environmental concerns which will drive the effort to eliminate any of the crossings remaining in Connecticut.

Response: *See Response 3.8 in this volume.*

CT 2-2.5

Comment: However, since a significant annual investment is made by the State of Connecticut to maintain and improve both the Metro-North and Shoreline East Commuter rail services, we are also greatly concerned with the impact that the project may have on the current and future commuter services.

Response: *See Response CT 1-3.8.*

CT 2-2.6

Comment The model that was used [to determine that all train operations can be accommodated on the Corridor with no adverse impacts] should be presented and analyzed in the FEIS; for without such analysis, we cannot adequately comment on this critical issue.

Response: *Impacts to commuter and freight rail are addressed in Volume I Section 4.9.3. That section makes reference to simulations prepared for FRA that show all rail uses on the NEC can be accommodated with mitigation (see Volume I, Section 5.5.1 (i)).*

CT 2-2.7

Comment: If there are unique operating or dispatching practices which must be "designed" and implemented to successfully accommodate the Corridor's highest capacity level, then they should be clearly identified and analyzed in the FEIS.

Response: *No unique dispatching practices will be required as a result of this Proposed Action.*

CT 2-2.8

Comment: Certainly, the FEIS cannot be considered complete without fully addressing the project's impact on marine traffic, especially in communities such as these, where boating is so much a part of commerce, recreation, and the overall quality of life.

Response: *See Response 3.4 in this volume.*

Southeastern CT Council of Governors

CT 2-3.1

Comment: Accordingly, we urge that every effort be made to assure that the Northeast Corridor Improvement Project be designed so as not to impose limitations on the use of the corridor for the movement of goods and materials by rail freight.

Response: *See Response 3.3 in this volume.*

South Central CT Regional Water Authority

CT 2-4.1

Comment: The Regional Water Authority seeks assurances from Amtrak that the Proposed Action will not degrade the public water supply.

Response: *Coordination between Amtrak and the Regional Water Authority has been established to ensure the protection of the public water supply. Mitigation included as part of the preferred alternative in Chapter 5 would also serve to avoid impacts to the water supply.*

CT Public Transportation Commission

CT 2-5.1

Comment: The Commission believes that freight and enhanced passenger operations can

coexist on the Corridor if reasonable accommodations are made. Such accommodations include the maintenance of, at a minimum, all existing horizontal and vertical clearances throughout the affected portion of the Corridor, the incorporation of passing sidings for freight service in Connecticut and Rhode Island and consideration of the operational needs of freight operations in setting the Amtrak schedules so as to allow for sufficient operating windows.

Response: *It is also the finding of this study that freight and high-speed passenger service can coexist on the NEC. Volume I, Sections 4.9 and 5.1.1(i) of the FEIS/R discuss potential impacts to freight rail operations and associated mitigation. Also see Response 3.3. in this volume.*

CT Historical Commission

CT 2-6.1

Comment: The State Historic Preservation Office believes that the DRAFT Environmental Impact Statement/Report does not adequately address potential effects upon cultural resources from proposed safety fencing, operational noise and vibration, installation of warning signals and bells, signalization changes, and grade crossing improvements. Likewise, this office recommends that additional catenary design alternative analysis is warranted vis-a-vis visual impact on Connecticut's cultural heritage.

Response: *FRA has coordinated with the SHPO its review of the potential affect of the Proposed Action on historic resources. FRA, the SHPO, and the Advisory Council on Historic Preservation have entered into a memorandum of agreement (MOA) which addresses the measures incorporated into the project to minimize any potential adverse impact on these resources.*

CT 2-6.2

Comment: This office recommends that reconnaissance studies to field identify the existence and integrity of potential archaeological resources are warranted for the Branford and New London Substation Utility Corridors; the Leetes

Island, Madison, Old Lyme, Stonington, and State Line Paralleling Station Sites; and the Johnnycake Hill Road Bridge. Additional field investigation is warranted for the proposed underwater cable crossings at Connecticut's five moveable bridges and for archaeologically sensitive areas which may be impacted by safety fencing and grade crossing improvements.

Response: *Reconnaissance studies in potential archaeological resource areas have now been completed for these sites. The results of these studies are discussed in Volume 1, Section 4.7 of the FEIS/R.*

The proposed underwater cable crossings will be placed in the Federal channel portion of the river, which has been previously disturbed (dredged). In consultation with the SHPO it was decided that additional study was not required at these locations. Fencing will be placed along the edge of the previously disturbed right-of-way, therefore, it warrants no further investigation. Finally, this project does not include the closing of any at-grade crossings, therefore, further investigation at these locations is not warranted.

CT 2-6.3

Comment: These studies should be completed and reviewed by our office prior to the circulation of a Final EIS.

Response: *See response to Comment CT 2-6.1.*

CT 2-6.4

Comment: Substantive changes in location must be reviewed by DMJM/Harris' historic and archaeological consultants and our professional staff. Further, several historic properties are administered by the Connecticut Department Of Environmental Protection's State Park Division who must be directly consulted regarding all pertinent improvements.

Response: *Connecticut Historical Commission will be notified and offered the opportunity for review of all substantive changes in location of proposed electrical facilities. The State Park Division of Connecticut*

DEP will also be involved, where appropriate, in approving substantive changes in location of electrical facilities. Review of any further changes in project design is covered in the MOA between FRA and the SHPO.

CT 2-6.5

Comment:

The State Historic Preservation Office recommends that the Federal Railroad Administration consult with the Advisory Council on Historic Preservation in accordance with the National Historic Preservation Act of 1966. This office believes that a memorandum of agreement will be required for the proposed undertaking in keeping with 36 CFR 800. However, supplemental information, as noted above, regarding the comprehensive evaluation of all potential project-related actions upon historic and archaeological resources must be provided to this office in order to facilitate our technical review of design and location alternatives and possible mitigation options.

Response: *See response to Comment CT 2-6.1*

Commissioner of CT-DEP

CT 2-7.1

Comment: Though most of the Amtrak ridership gains will be captured from air shuttles, the trips captured from the automobile mode will also lessen congestion on the highways of Connecticut and surrounding states. The proposed electrification and resultant improvements in travel times will be one more critical transportation link in providing a mobility system for this region which is less dependent on personal automobile use.

Response: *Comment noted.*

CT 2-7.2

Comment: One significant issue that does need to be addressed at the FEIS stage is the mitigation of this project's impacts on the rail freight service in southern Connecticut and Rhode Island. The DEIS makes no mention of any measures to be taken to allow freight and passenger operations to co-exist on the Corridor.

Response: See response CT 1-3.7.

CT 2-7.3

Comment: A second issue which should be addressed at the FEIS stage, and must be addressed in order to certify consistency with the State's coastal management program, is that of route alternatives.

Response: A more extensive discussion of route alternatives is contained in the FEIS/R, Volume I, Section 2.2.4. See also response 3.1 in this Volume.

CT 2-7.4

Comment: Similarly, the locational rationale for individual electrical facilities within the coastal boundary must be provided.

Response: Volume I, Appendix L discusses the alternatives analysis performed for the placement of substation facilities in Connecticut which is similar to the process used in siting all facilities. In addition, the Noank Paralleling Station has been relocated and discussed in Volume II, Section 1.1. A plan of the new site is located in Volume I, Appendix A.

CT 2-7.5

Comment: Another very important coastal issue which the DEIS does not address is that of impacts to recreational and commercial boat traffic caused by more frequent bridge closures.

Response: See Response 3.4 in this volume.

CT 2-7.6

Comment: Fisheries impacts, mostly related to the construction of the five underwater catenary crossings at the moveable bridges, will require both further detail and proper seasonal timing if impacts to anadromous fish and shortnose sturgeon are to be avoided.

Response: Volume I, Section 4.12 of the FEIS/R discusses the issue of fisheries impacts, seasonal timing, and potential impacts to anadromous fish and the shortnose sturgeon. It is anticipated that seasonal restrictions for underwater work in any of these five moveable bridge crossings will restrict the work effort between

February 1 through September 30.

CT 2-7.7

Comment: Proper controls on construction activity will eliminate many potential impacts of the proposed action.

Response: Best Management Practices will be required during all construction activities for the NECIP.

CT 2-7.8

Comment: Due to the size of this project, attempting to evaluate all impacts arising along the 156 mile corridor and all of the diverse issues involved, the level of detail contained in the DEIS is necessarily constrained.

Response: Comment noted.

CT 2-7.9

Comment: Although the DEIS notes that passenger trains get scheduling preference over freight trains on the Corridor pursuant to Federal law, the project as described appears to make no accommodation whatever for the existing, or future, freight operations.

Response: See Response 3.3 in this volume.

CT 2-7.10

Comment: In addition to the substantial drawbacks of nighttime operations, the existing daytime service on the Corridor cannot be accomplished within the operating windows projected by Amtrak to be available. The DEIS makes no mention of any provisions or mitigation measures to accommodate this extra equipment and track outages. Given the length of the project construction time-frame, this issue is a significant one which needs to be addressed in project planning in the Final EIS.

Response: Measures to mitigate the impact on rail operations of the construction of the proposed project are discussed in the FEIS/R, Volume I, Section 5.1.1(i).

CT 2-7.11

Comment: To the degree that P&W's assessment of future cargo volumes are accurate, either

these additional volumes could also be shifted onto the highways or this economic activity would be lost.

Response: *Volume I, Sections 4.2 and 4.9 of the FEIS/R discuss the issue of diversion of freight movements from rail to truck. See response CT 1-3.7 and Response 3.3 in this volume.*

CT 2-7.12

Comment: DEP asks that this claim be reconciled with a P&W claim that vertical clearances along portions of the Corridor will be reduced to the minimum clearance available along the entire Corridor, thus resulting in current movements between New Haven and Davisville, RI which require 16' 10" overhead clearance being forced off the Corridor.

Response: *The NECIP project will maintain the minimum existing clearance throughout the entire corridor. No clearance will be reduced below this minimum level. This issue is discussed in Volume I, Section 5.1.1(i) of the FEIS/R.*

CT 2-7.13

Comment: No discussion of their [impacts to rail freight transportation] mitigation is contained in the DEIS. Mitigative measures should be incorporated in project implementation to allow the passenger and freight operations to coexist, lest many of the anticipated project benefits be lost.

Response: *See Response 2-7.11 in this volume.*

CT 2-7.14

Comment: We cannot assess what residual air quality benefits, if any, would remain should all Corridor freight shipments be converted to truck transport. Information to make this assessment is not available in the DEIS. Unless the FEIS includes mitigative measures that make this modal shift unlikely, calculation of a net emissions benefit after factoring in freight movement diversion to trucks should be included in the FEIS.

Response: *See response 2-7.10.*

CT 2-7.15

Comment: The DEIS does not address PM₁₀, SO₂ or toxic emissions. At least a qualitative discussion of these should be included in the FEIS.

Response: *Section 4.10 of the FEIS/R has been revised to include a quantitative discussion of SO₂ and a qualitative discussion of PM₁₀.*

CT 2-7.16

Comment: On page 2 of Technical Study 10, please note that the Clean Air Act Amendments of 1990 do not require an oxygenated fuel program for the New Haven area. Therefore, vehicle emissions factors used in the analysis should not include the effects of oxygenated fuel.

Response: *[The writer withdrew this comment on January 11, 1994; see Comment 2-8.1]*

CT 2-7.17

Comment: Additional information should be provided describing the emission inventories used and the resulting design year background values.

Response: *As stated in Volume III, Technical Study 10 of the DEIS/R, the dispersion modelling was performed at Route 128 Station in Massachusetts, and, therefore, MA DEP default background CO concentrations of 5 ppm for the one-hour averaging period and 3 ppm for the eight-hour averaging period were used for the Existing Conditions. For future conditions, the 2010 No-Build CO emissions were compared with the Existing Conditions CO emissions. As shown in Table 10.5 of Technical Study 10, future No-Build CO emissions in the project corridor (24,662 kg/day) are estimated to be about 50 percent of the Existing Conditions CO emissions (49,801 kg/day). Therefore, background CO concentrations of 2.5 ppm for the one-hour averaging period and 1.5 ppm for the eight-hour averaging period were used in the 2010 CO impacts assessment.*

CT 2-7.18

Comment: Based on a review of Tables 10.17 and 10.18, it appears the error may be that

tabled one-hour values for 1992 were inadvertently overwritten with modeled eight-hour values for the 2010 no-build case.

Response: *One-hour CO concentration data in Tables 10.9 and 10.10 were mis-typed. Correct data was supplied in Tables 10.19 and 10.20. Tables 10.9 and 10.10 have been corrected in the FEIS/R, as have Tables 3.10-7 and 3.10-8.*

CT 2-7.19

Comment: Based on the context of the statement, it appears that the authors are actually referring to reductions in vehicle related VOC emissions, not VMTs.

Response: *The text on page 10-29 of Technical Study 10 contains a typographical error. The existing text reads: "Between 1992 and 2010, with a no-build scenario, vehicle-miles-travelled (VMTs) in the NEC are projected to expected to decrease by over 40 percent." The correct text should read: "Between 1992 and 2010, with a no-build scenario, vehicle-miles-traveled (VMTs) in the NEC are projected to increase. But because of the Federal Motor Vehicle Emissions Control Program (FMVCP) and the state Inspection and Maintenance (I/M) programs, automobile emissions are expected to decrease by over 40 percent."*

CT 2-7.20

Comment: Existing 1992 aircraft emissions in Tables 10.11-16 are not consistent with those in Tables 10.6-8.

Response: *Emissions data in Tables 10.6 through 10.8 were mis-typed. Correct data was supplied in tables 10.11 through 10.16. Tables 10.6 through 10.8 (and a small summing error in Table 10.11) have been corrected in the FEIS/R, as have Tables 3.10-4 through 3.10-6.*

CT 2-7.21

Comment: The text on page 10-39 does not indicate what traffic volume growths are assumed to occur between 1992 and 2010 in the vicinity of the Route 128 express station. Although the text refers to the incremental increase between the 2010

no-build and build cases, it is not clear whether traffic growth from 1992 through 2010 is included.

Response: *[The writer withdrew this comment on January 11, 1994; see Comment 2-8.1]*

CT 2-7.22

Comment: It is important that these [mitigation measures used during construction] and other available mitigative measures are followed to minimize [air quality] impacts during the construction phase of this project.

Response: *Comment noted.*

CT 2-7.23

Comment: The text states (page 10-45) that "the 2010 no-build scenario will have lower emission levels for all pollutants than the 1992 condition..." However, as indicated in Tables 10.13 and 10.14, NOx emissions between the existing and no-build 2010 scenario are projected to increase by 25% in the corridor due to large increases in emissions from aircraft and trains. This does not alter the finding that emissions for the build case will be less than for the no-build case.

Response: *The text on page 10-45 of Technical Study 10 contains a typographical error. The existing text reads: "The 2010 no-build scenario will have lower emission levels for all pollutants than the 1992 condition,...". The corrected text should read: "The 2010 no-build scenario will have lower emission levels for all pollutants, except NOx, than the 1992 condition,...".*

CT 2-7.24

Comment: The list of required State approvals included in Vol. I, Table 5.6-1 is incorrect.

Response: *This error has been corrected in Volume I of the FEIS/R, Table 5.4-1.*

CT 2-7.25

Comment: The DEIS states that all alternative routes were dropped from consideration due to cost, but failed to include a comparative analysis of those costs as justification for

the elimination of alternatives. This justification should be presented in the FEIS.

Response: *Volume I, Section 2.2.4 of the FEIS/R presents this analysis. See also Response 3.1 in this volume.*

CT 2-7.26

Comment: It is OLISP's general observation that while the DEIS identifies locations of proposed activities. It does not contain plans in sufficient detail to verify described impacts, or the lack thereof, upon these resources, or to evaluate the effectiveness of proposed mitigation for such impacts.

Response: *To the extent possible, the FEIS/R has been revised to add detail to plans for proposed activities.*

CT 2-7.27

Comment: The scale and level of detail of maps in Vol. 2 of the DEIS are inadequate to verify the written descriptions of impacts on tidal and freshwater wetlands and watercourses. There are several instances where written descriptions indicate that there are no resources or resource impacts, while the maps show overlapping symbols for wetland resources and facilities.

Response: *The scale of mapping in Volume II of the DEIS make it difficult to illustrate site conditions to the appropriate level of detail needed for impact evaluation. Written site descriptions as provided are more accurate than the available mapping since they are written on a site specific basis.*

Further discussion of inconsistencies is provided in Section 4 of the FEIS/R, including documentation to redesignate the sites of the Old Lyme paralleling station, Millstone paralleling station and state line paralleling station as uplands based on site conditions.

CT 2-7.28

Comment: Due to this lack of specificity, it is not possible at this time to determine the resources which will actually be affected

by the proposed activities. Consequently, OLISP will have to wait for the detailed application plans, which must accompany requests for water quality certification and coastal consistency concurrence to make substantive comments.

Response: *Comment noted.*

CT 2-7.29

Comment: Of particular concern at this time, however, is the proposed construction of the Noank paralleling station. In preparing plans for this and other sites, wetlands must be accurately delineated.

Response: *The proposed location of the Noank paralleling station has been changed. Volume I, Appendix A of the FEIS/R illustrates the new proposed location.*

CT 2-7.30

Comment: This information source [OLISP Tidal Wetland Maps] is not referenced in the DEIS. These maps should be utilized to insure that all wetlands and wetland impacts are accurately identified.

Response: *Volume III of the DEIS references the review of Tidal Wetlands Map #35-1-2 at the Leetes Island paralleling station site. Other sites were reviewed for tidal wetlands, however, only non-tidal resources were involved. A reference to the tidal wetland mapping was not included in the literature cited.*

CT 2-7.31

Comment: Specifically, the "measure" of the "alteration or destruction of wetland or resource area including dredge or fill" [Table 4-12-1, Vol. I] should include the quantification of any change in the salinity of water in the wetland, while the "significance threshold" of "stormwater runoff effects during and after construction" should include the dilution of coastal waters.

Response: *Table 4.12-1 has been modified to represent these changes including the dilution of coastal waters and changes in salinity levels.*

CT 2-7.32

Comment: Adverse impacts may also result from the potential incidental discharge into wetlands and watercourses, either on-site or during transport from the site, of embankment fill excavated in association with the installation of catenary poles, noise barriers and ballast mats, and with the depression of tracks at underpasses.

Response: *Adverse impacts associated with the incidental discharge into wetlands or water courses during installation of catenary poles, and bridge work have been addressed in Chapter 4 of the FEIS/R.*

Mitigative measures for any construction activity associated with the electrification project will employ Best Management Practices including erosion and sedimentation control measures, staging equipment off-site, and incorporating water quality measures to avoid discharges into watercourses and to accommodate any stormwater runoff.

CT 2-7.33

Comment: Accordingly, even though such activities will be within the ROW, detailed site plans for such modifications, accompanied by descriptions of intended Best Management Practices and mitigation activities, will be required for review and approval prior to authorization.

Response: *Comment noted.*

CT 2-7.34

Comment: While the DEIS indicates that these structures [Leets Island PS, New London SS, Noank PS, and Stonington PS] will be built to FEMA standards, OLISP would prefer that the facilities be relocated out of coastal flood hazard areas. The FEIS should address in more detail the potential flood impacts of these and other proposed activities.

Response: *Volume I, Section 4.12 of the FEIS/R has been revised to include more detail on potential flood impacts.*

CT 2-7.35

Comment: The expected disruption of freight service, including daytime delays and deferral of additional service to nighttime hours, would affect the productivity and viability of industrial and commercial enterprises along the NEC, as described in Vol. I pages 5-33 and 5-34, and as cited by speakers at the public hearings in Old Saybrook and New London. Such disruptions could have potentially adverse impacts on existing and future local employment conditions as discussed earlier.

Response: *See Response 3.3 in this volume.*

CT 2-7.36

Comment: Adverse economic impacts could also result from the effects on boat and ship traffic due to the required increased closures of all five moveable railroad bridges in Connecticut which will be necessary to accommodate increased rail traffic.

Response: *See Response 3.4 in this volume.*

CT 2-7.37

Comment: Relocation of the Noank paralleling station, which the DEIS says will be investigated, is strongly recommended because of the number of environmental, land use and aesthetic problems that arise in connection with its proposed location.

Response: *See response to Comment CT-2-7.29.*

CT 2-7.38

Comment: At those locations where illegal rail crossings specifically provide access for recreational fishing or to shoreline areas including beaches, the FEIS must include an analysis of alternatives for maintenance of such access. An example of such an alternative is the pedestrian access way constructed under the railroad bridge over the Niantic River. The FEIS should also evaluate the improvement of public access which has been restricted by past transportation infrastructure and related development, since this is a major objective of the CCMA.

Response: *For safety reasons, Amtrak prohibits*

unauthorized access to the railroad right-of-way. As the right-of-way is private property, unauthorized access constitutes trespassing, and it is Amtrak's stated policy to seek aggressive enforcement of the trespassing statutes. Due to the safety concerns of pedestrians crossing the tracks, the FRA plans to require certain areas of the right-of-way to be fenced. In areas where this action may hinder access to recreational resources, Amtrak will work with the local authorities to identify opportunities to encourage access without impacting public safety. These issues will be addressed on a site-specific basis. The proposed project does not eliminate any existing, legal points of access across the tracks, therefore, the study does not find an impact regarding this issue.

CT 2-7.39

Comment: Specifically, Vol. 1, Sec. 5.2.2.3 states that FRA is not directed under the Amtrak Authorization and Development Act to implement the plan to close at-grade crossings once that plan is completed, separate and distinct from the electrification project. However, Vol. 3, Section 8.4.4.1 states that closure of at-grade crossings would closely coincide with implementation of the electrification plan. It is, therefore, imperative that the FEIS clarify any misperceptions regarding this issue. We, therefore, strongly support the ongoing investigation, funded by FRA, of the use of quad gates to improve safety at at-grade crossings as an alternative to crossing elimination.

Response: *The statement in Volume III, section 8.4.4.1 of the DEIS/R was in error. The decisions on whether to implement the grade crossing elimination plan will not be made by FRA, but rather by the responsible State agencies pursuant to State law. The demonstration funded by FRA of improved grade crossing protection at School Street in Groton is funded under the National High-Speed Ground Transportation Technology Demonstration Program which is separate and distinct from NECIP.*

CT 2-7.40

Comment: OLISP will, therefore, consult with the State Historic Preservation Office in reviewing detailed application materials when submitted.

Response: *Comment noted.*

CT 2-7.41

Comment: Similar to the previous discussion of wetlands and watercourses, the DEIS does not contain plans in sufficient detail to verify described impacts, or the lack thereof, on agricultural lands within the coastal area.

Response: *The proposed action does not impact any active agricultural lands. See Volume I, Section 4.1 of the FEIS/R.*

CT 2-7.42

Comment: The number of visually sensitive receptors (VSRs) appears much too conservative (only 39 individual sites along the densely populated Connecticut coast from which visual quality will be affected to any degree).

Response: *Although most of the 156 mile corridor does not pass through scenic areas, many valuable vistas exist. However, given the criteria on which the evaluation was based, not all of these areas qualified as VSRs. Further, many VSRs would not be significantly affected by the Proposed Action. Approximately 225 potential sites were identified. Of these 66 were determined to be VSRs, and 42 would be significantly impacted. Volume I, Section 3.11 of the FEIS/R provides a revised list of VSRs.*

CT 2-7.43

Comment: Additionally, the DEIS fails to evaluate visual impacts on public land uses such as recreational facilities, e.g., Rocky Neck State Park, as well as the potential visual impacts of proposed noise barriers.

Response: *These visual impacts are now included in the discussion of visual impacts in Volume I, Section 4.11 of the FEIS/R.*

CT 2-7.44

Comment: We assume that calcium chloride is the

contemplated dust control agent, but if some other agent is proposed, the FEIS must identify it and discuss its toxicity and application rate.

Response: *The only dust control agent contemplated for the electrification project is water. If, during construction, it is determined that chemicals are needed, calcium chloride may be added.*

CT 2-7.45

Comment: The FEIS should provide further analysis of these potential adverse impacts [on finfish habitats], as appropriate, and an evaluation of alternatives for mitigation of those impacts.

Response: *Impacts to finfish habitat are discussed in Volume I, Section 4.12 and mitigation of these impacts are addressed in Section 5.1.*

CT 2-7.46

Comment: The DEIS contains very little information on the construction-related impacts at these crossings on finfish and aquatic resources. For instance, text on page 11-72 refers to Table 4 in Appendix E which provides a list of fish species that occur in these rivers. No Table 4 is contained in Appendix E.

Response: *Volume I, Section 4.12 of the FEIS/R contains additional information on the impacts to aquatic resources.*

CT 2-7.47

Comment: Because temporary habitat disturbance will be directly related to the amount of excavation required for cable placement, the FEIS should provide information on the dimensions of the proposed trenches, the amount of material proposed to be dredged and backfilled at each site, and the expected duration of in-river work.

Response: *See response to Comment CT-2-7.6.*

CT 2-7.48

Comment: The evaluation [of the project's impact on shortnose sturgeon] should be coordinated with staff of the DEP Fisheries Division, as well as NMFS.

Response: *This coordination took place as part of*

the FEIS/R. Construction season restrictions related to the shortnose sturgeon are included in section 5.1.1(k) of Volume I of the FEIS/R.

CT 2-7.49

Comment: The FEIS should include an assessment of any aquatic habitat or water quality impacts expected to result from catenary installation at water crossings and should also provide a description of any instream construction access methods that may be required.

Response: *This assessment is included as part of the FEIS/R Volume I, Section 4.12. Submarine cable installation issues are discussed in the U.S. Army Corps of Engineers permit application. This assessment is included as part of the FEIS/R, Volume I, Section 4.12.*

CT 2-7.50

Comment: Therefore, the FEIS should investigate the feasibility of improving angler access at areas where safety is not an issue.

Response: *See response to Comment CT 2-7.38.*

CT 2-7.51

Comment: In a June 3, 1993 letter from Linda Gunn of DEP Fisheries to Jim Fougere of Smart Associates included in Appendix F of Volume of the DEIS, a question was raised about the possible effect of electromagnetic fields on the behavior of finfish, particularly anadromous fish, which transit the locations of the proposed underground and overhead cable crossings. The limited discussion on page 11-72 of Volume III did not fully answer this question.

Response: *Volume I, Section 4.5 of the FEIS/R includes a discussion of EMF impacts on fisheries. A summary of this information indicates the observed lack of sensitivity by fish to 60 MHz (ac) fields and lack of fields greater than 12 mG (milliGauss) more than 3 feet above the bottom of the channel limits potential impacts to finfish.*

CT 2-7.52

Comment: In order for the DEP Inland Water Resources Management Division to

review the rail electrification project for consistency with Connecticut's Water Quality Standards pursuant to Section 401 of the Clean Water Act, additional information will need to be provided. The necessary information includes:

- Detailed construction drawings
- Site by site project description
- Environmental assessment of existing vs. post-construction freshwater conditions
- Analysis of alternatives for bridge impacts
- Mitigation plans for surface water impacts.

Response: *The detailed information required by the Connecticut Department of Environmental Protection will be provided in Amtrak's application for certification under section 401 of the Clean Water Act, as well as Amtrak's application for a finding that the project is consistent with Federal and state coastal zone management laws.*

CT 2-7.53

Comment: Spoils management, chiefly from the track undercutting, does not appear to have been considered adequately in the DEIS.

Response: *Spoils management from a wetland and water resource perspective is typically related to discharging materials into wetlands or incidental runoff into wetlands or watercourses. As noted in the FEIS/R mitigative measures, all construction activity associated with the electrification project will employ Best Management Practices including erosion and sedimentation control measures and stormwater management. Spoil will be disposed of in a manner consistent with Federal and state regulations*

CT 2-7.54

Comment: On page 1-3, Grand Central Terminal is twice mis-referenced as Grand Central Station.

Response: *The error has been corrected in the FEIS/R.*

CT 2-7.55

Comment: What degree of latitude exists in the 200' spacing for the catenary support structures?

Response: *The maximum spacing of the poles is 220 feet. However, on curved sections of the track, the minimum spacing is closer. The exact latitude depends on the degree of curvature of the track.*

CT 2-7.56

Comment: The New London substation and the Leetes Island, Noank and Stonington paralleling stations are sited within the 100-year flood boundary. What are the operational impacts to these facilities should they be flooded? How vulnerable to outages are they at various depths of flooding?

Response: *See response to Comment CT-2-7.34*

CT 2-7.57

Comment: On a related matter, what fluids will be used in the various types of substations and in what volumes? Will any provisions for spill containment be incorporated in the design of electrical facilities?

Response: *Spill contingency plans have been prepared to address leakage during operation of the paralleling stations, switching stations, and substation.*

Transformer coolant will be mineral oil in accordance with ASTM as opposed to oil containing polychlorinated biphenyls (PCBs), which were traditionally used in these types of facilities.

All facilities will have impermeable containment areas in the event that spills do occur.

CT 2-7.58

Comment: Please explain the reason behind the relocation of the 51 jobs transferred out of New Haven.

Response: *Elimination of the locomotive change in New Haven for the existing 20 New York-Boston trains will result in a decrease in New Haven of 17 train and engine crews.*

Each crew consists of an engineer, conductor, and assistant conductor, totalling 51 jobs eliminated in New Haven. Amtrak plans to eliminate most, if not all, of these jobs through attrition and transfer to newly created New Haven-based jobs.

CT 2-7.59

Comment: Noise from 13 of the 25 proposed electrical facilities may exceed the noise impact thresholds. What level of noise reduction is expected from the sound absorptive barrier wall and the fan silencers or quiet fans to be used at these locations? How many of the 13 facilities will still remain above the noise impact thresholds?

Response: *Noise control treatments for the electrical facilities can be designed to provide noise level reductions in the range of 10 to 15 dBA. This level of treatment can be expected to reduce facility noise to below the impact threshold levels at noise-sensitive locations near all of the planned electrical facilities.*

CT 2-7.60

Comment: Shortfalls in year 2010 parking capacity at all express stations except New Haven are noted. These shortfalls could be a very serious constraint on the achievement of the anticipated levels of ridership. What plans does Amtrak have to address this issue so that the benefits cited in the DEIS can be achieved?

Response: *The requirement for additional parking is not a direct result of this project phase, but of NECIP as a whole. Development of parking facilities has been evaluated at each location between New York and Boston, as a primary component in the identification of facility requirements for the NECTP.*

At South Station and Back Bay Station, Boston, it would not appear to be appropriate for Amtrak to pursue parking development. In addition to the legislative freeze effected by the City, there are two additional reasons for Amtrak to take this position. First, experience has indicated that most

passengers accessing Amtrak at these stations do not have the need to park. Public transportation and pick up/drop off in private cars are the predominate modes of transfer. The second reason is the prohibitively high cost of acquiring additional real estate in center-city areas should the land be available.

Boston area park and ride customers will be accommodated at Route 128 Station, where Amtrak in conjunction with the MBTA are progressing plans for a joint parking facility that will handle the parking needs of both intercity and commuter passengers into the next decade.

At Providence Station, a parking structure is proposed to be built next to the station above the right-of-way. ConnDOT is exploring a number of options to provide additional parking at New Haven.

CT 2-7.61

Comment: Has Amtrak or FRA performed a check of DEP files for spills or violations at the proposed substation sites which formerly supported industrial uses. If not, we can perform that service if supplied with the street addresses of these sites and any former users at the sites.

Response: *Comment noted. The files for these sites were checked and the results are presented in the FEIS/R, Volume I, Section 4.13.*

CT 2-7.62

Comment: Ballast mats are cited as a mitigation strategy to reduce vibration levels where impact thresholds may be exceeded. How costly are these to employ? How effective are they projected to be here or have they been in other locations where they have been employed? Are there significant construction difficulties involved in their placement?

Response: *A rough estimate of the installed cost for ballast mats is \$15 per square foot of mat. Assuming that each of the two high-speed tracks would require a 12.5-ft wide mat, the estimated cost for double-track*

ballast mat treatment is \$375 per lineal foot. The effectiveness of ballast mats depends on their mounting and on the ground vibration frequency characteristics, with better performance obtained when the mats are mounted on a stiff base and when the ground vibration is dominated by higher frequency energy. For example, ballast mats installed along a segment of the MBTA Red Line subway tunnel in Boston, MA reduced ground-borne vibration by more than 80 percent. Although there is limited data on the effectiveness of ballast mats for at-grade installation, data from tests carried out in Germany suggest that ballast mats could reduce vibration levels along the Northeast Corridor by 30 to 50 percent at some locations. Volume I, Section 5.1.1.(d) of the FEIS/R describes a vibration testing program designed to evaluate the potential effectiveness of various vibration mitigation measures. With regard to construction, the primary difficulty with installing ballast mats is the necessity of taking track out of service during the installation.

Noank Zoning Commission

CT 2-8.1

Comment: The writer is opposed to the project due to concern about:

- Increased noise
- EMFs
- Impacts on environment and wildlife.

Response: A summary of the discussions regarding noise and EMFs are presented at the beginning of Volume III. Volume I, Section 4.12 provides a discussion of the proposed project's impacts to natural resources in general, and wildlife specifically.

CT DEP

CT 2-9.1

Comment [Upon receiving further information, DEP withdraws comments 2-7.19 and 2-7.24 from its December 23, 1993, letter.]

Response: The above referenced comments are listed, but have been removed from consideration.

Fortune Plastics

CT 3-1.1

Comment: Fortune plastics is very concerned about the impact that the Northeast Corridor Improvement Program (NECIP) will have on freight rail service in this region.

Response: *See Response 3.3 in this volume.*

CT 3-1.2

Comment: First, it appears that while the study recognizes the issues that will result in an adverse impact on freight rail, these issues are treated as potential or hypothetical problems, rather than the concrete problems they are.

Response: *See Response 3.3 in this volume.*

CT 3-1.3

Comment: Second, as a result of the speculative nature in which freight rail issues are addressed, the study offers no recommendations for mitigating measures.

Response: *See Response 3.3 in this volume.*

Tilcon CT, Inc.

CT 3-2.1

Comment: As a freight rail user, Tilcon of Connecticut is very concerned about the impact that the Northeast Corridor Improvement Program (NECIP) will have on freight rail service in this region.

Response: *See response to Comment CT 3-1.1.*

CT 3-2.2

Comment: First, it appears that while the study recognizes the issues that will result in an adverse impact on freight rail, these issues are treated as potential or hypothetical problems, rather than the concrete problems they are.

Response: *See response to Comment CT 3-1.1.*

CT 3-2.3

Comment: Second, as a result of the speculative nature in which freight rail issues are addressed, the study offers no recommendations for mitigating

measures.

Response: *See response to Comment CT 3-1.1.*

CT Fund for the Environment

CT 3-3.1

Comment: I am writing to request a 90-day extension of the comment period for the Draft Environmental Impact Statement (DEIS) on the New York-Boston rail electrification project.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Boats Incorporated

CT 3-4.1

Comment: Being an owner of one of Connecticut's largest marinas, the proposed electrification would virtually eliminate all marine traffic accessing the Sound from the Niantic River. As proposed, passenger train traffic would now reach up to 60 trains per day. That equates to one train every 18 1/2 minutes. My concern of course is when would the train bridge be open to allow marine traffic?

Response: *See Response 3.4 in this volume.*

CT Marine Trades Association

CT 3-5.1

Comment: With the proposed increase to over 50 trains a day, or one every 18-20 minutes, the access to our boat yards, marinas, and yacht clubs could easily become a moot point.

Response: *See Response 3.4 in this volume.*

CT 3-5.2

Comment: Proposals to dredge the Thames river to allow increased traffic and a home berth for the Coast Guard's boats, including the Eagle, will be negatively impacted by the Amtrak proposal.

Response: *See Response 3.4 in this volume.*

Seaport Marine

CT 3-6.1

Comment: My point is to have another burden put upon us by not having at least the openings we now have, it certainly would mean a drop in slip rentals and a big loss in repair work.

Response: See Response 3.4 in this volume.

Fort Rachel Marine Service

CT 3-7.1

Comment: The draft report fails to adequately address the adverse impact that this project will have on marine related businesses.

Response: See Response 3.4 in this volume.

CT 3-7.2

Comment: The report fails to adequately address the effects of electromagnetic fields (EMFs) on the coastal population and addresses 12.5 kV, not the 25 kV proposed.

Response: *The EMF technical evaluation was updated in the FEIS/R. This evaluation is contained in Volume I, Section 4.5. The analysis in both the DEIS/R and FEIS/R was based on the 25 kV system contained in the Proposed Action. Also see Response 3.5 in this volume.*

CT 3-7.3

Comment: It is doubtful that there is a passenger demand of 15,000 people per day commuting between New York and Boston.

Response: *As Amtrak operating speeds and frequency improves and as other travel modes become more congested, passenger rail is expected to capture a significant percentage of the air shuttle market between Boston and NYC, as discussed in Volume I, Section 4.9 of the FEIS/R.*

Madison Racquet Club

CT 3-8.1

Comment: Given these two concerns - public safety and disruption of activities at the club - we feel that a solid noise barrier which would serve to satisfy both concerns is necessary.

Response: *A review of aerial photographs indicates*

that the nearest court at the racquet club is approximately 160 feet from the centerline of the rail corridor. Based on the project noise criteria, noise impact at this distance is not expected to be significant for recreational facilities. Even for more sensitive residential land use, significant noise impact along this segment of the Northeast Corridor is not expected to extend more than 125 feet from the rail corridor centerline under worst case project conditions. Therefore, construction of a noise barrier is not considered to be warranted at this location.

O'Brien Law Offices/Trustees of Elihu Island

CT 3-9.1

Comment: This writer is generally opposed to the project because of the impact of proposed elimination of at-grade crossings on quality of life and natural resources.

Response: *Comment noted. See response to Comment CT 1-3.9.*

Northeast Utilities

CT 3-10.1

Comment: We do not agree with the methodology or assumptions used to determine the project's impact on overall air quality. We feel that using a methodology that reflects the characteristics of the power plants actually to be utilized would more accurately reflect the effects of the project on the region.

Response: *Based on the revised data supplied by Northeast Utilities, the calculation of the impacts to air quality have been revised and are presented along with the assumption made in the DEIS/R. The new calculations are presented in Volume I, Section 3.10 of the FEIS/R. The technical support data for these calculations may be found in Volume II, Chapter 6 of the FEIS/R.*

Duncklee Inc.

CT 3-11.1

Comment: I am against the proposed project because of the possible effects of electromagnetic radiation.

Response: *Comment noted.*

CT 3-11.2

Comment: I am against the proposed project because of reduced boating and commercial commerce which brings in total revenue of \$1.25 billion, of which \$836 million is from boating.

Response: *Comment noted. See Response 3.5 in this Volume.*

CT 3-11.3

Comment: I am concerned about the effects on wetlands due to a blatant lack of maintenance that Amtrak has provided by not cleaning out tidal areas and water pipes that have filled with silt from 25 years of neglect.

Response: *The proposed project would not effect tidal flushing. See also Volume I, Section 4.12 for a discussion of the impacts of bridges and causeways on tidal flushing.*

CT 3-11.4

Comment: I am against the proposed project because the lack of maintenance of drain pipes by Amtrak and the impact to wetlands and many forms of wildlife that live there that will be affected and disrupted. Everyone is trying to rejuvenate the wetlands and Amtrak will scare [away] all these irreplaceable birds.

Response: *Comment noted. See section 4.12 for a discussion of the project's impacts on natural resources.*

CT 3-11.5

Comment: I am against the proposed project because housing values will depreciate because of track noise, substation noise, electromagnetic radiation.

Response: *Comment noted. See section 4.2 for a discussion of the project's impacts on property values.*

Noank Historical Society

CT 3-12.1

Comment: Saving that half hour is not worth the staggering cost in dollars and in environmental damage, which this

project necessarily will entail.

Response: *Comment noted.*

CT 3-12.2

Comment: We will receive absolutely no benefit from this misuse of our money.

Response: *See response to Comment CT 1-1.7*

CT 3-12.3

Comment: The overhead electrical wires cantilever from pairs of poles at a maximum distance apart of 175 feet, no matter how skillfully designed, will be an endless eyesore through the countryside.

Response: *Comment noted.*

CT 3-12.4

Comment: Historic districts, civic groups and local governments all encourage putting wires underground for safety during the frequent high wind storms, as well as for community attractiveness.

Response: *The catenary system cannot be installed underground because the train's pantograph must make contact with the catenary system. The feeder and static wire are optimally positioned to minimize Electromagnetic Fields (EMF). Relocation of these wires underground will substantially increase the EMF fields. The static wire provides lightning protection and is a vital component in safety grounding. The effectiveness of the static wire will be substantially reduced if it were placed underground.*

CT 3-12.5

Comment: We know that the effect on the already deteriorating coastal environment will be substantial.

Response: *Comment noted.*

MARINPRO

CT 3-13.1

Comment: I strongly request that the review period for the Amtrak Electrification project Environmental Impact Statement be extended for 90 days to allow adequate public comment.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Citizens Against the Amtrak Electrification Project
CT 3-14.1

Comment: Volume I, page 4-19: "As a point of reference the intensity of the earth's static magnetic field is approximately 500 mG in the northeastern United States." This is very misleading because the earth's magnetic field is not a "60 hertz alternating current" field.

Response: *The comment is acknowledged. Time varying and static fields are different and are separate issues for purposes of biological and health changes. The comparison has been made merely for the purpose of providing perspective on the magnitude of magnetic fields discussed in the DEIS/R.*

CT 3-14.2

Comment: While scientists cannot agree on the health risk aspects, all in this field acknowledge that "60 Hz AC" power, as in the proposed Amtrak power lines, vibrates the molecules in a human body exposed to the power and its EMF 60 times a second and causes hormonal and cell changes. (Dr. Jack Adams, Carnegie Mellon University; Dr. Reba Goodman, Columbia University).

Response: *See response to Comment CT 3-38.7, later in this volume.*

CT 3-14.3

Comment: Vol. II: Several maps of property near the rail line call "wetlands" by another name.

Response: *Volume II of the DEIS/R (Land Use and Regulated Areas) is not being republished as part of the FEIS/R. All inaccuracies identified in these maps are being noted on the official copy of these maps to be included in the Administrative Record maintained by FRA. The corrected maps are available for public review at the Volpe Center in Cambridge, MA or FRA's office in Washington, DC.*

CT 3-14.4

Comment: Vol I, pp. B-43 and B-44: These pages list "addresses of homes which are visually sensitive receptors," which we presume means homes that will be adversely impacted by looking out on wires and/or poles and/or substations and/or paralleling stations and/or switching stations and/or other changes in the environment that will cause a reduction in property values. The list of home is incomplete. It ignores homes with the same view listed.

Response: *An expanded list VSRs is presented in Volume I, Table 3.11-1 of the FEIS/R.*

CT 3-14.5

Comment: Vol. I, pp. B-25, B-29: There are many more pedestrian crossings than those listed.

Response: *The FEIS/R's discussion of pedestrian crossings has been revised to reflect this and other similar comments. However, the number of illegal pedestrian crossings does not significantly change the analysis of impact or the appropriate mitigating measures.*

CT 3-14.6

Comment: Vol. III, pp. 2-4 and 2-5: This section carries forward the message: the project will create 269-279 new jobs. This is a reason Senators Dodd and Lieberman cite in favor of the project. However, in truth, reading the small print, we note that 51 jobs are being transferred out of New Haven. Also, we note that New London will be discontinued as an express stop. We note that 365,000 automobile passengers will switch to trains which will result in (some) lost business to retail establishments, like gas stations and restaurants, along Route 95. What then is the actual job impact on Connecticut?

Response: *The study predicts only 28 net jobs will be lost in Connecticut as a direct result of this project. It also predicts that several hundred jobs will be gained in Connecticut during NECIP construction. Volume I, Section 4.2 of the FEIS/R discusses employment impacts and*

benefits in Connecticut resulting from the project. With regard to New London, it presently is not an express stop, however, Amtrak has prepared a schedule (see Table 4.9-3 in Volume I) showing three express train round trips per day in the future. In addition, there will be a significant improvement in conventional train service. Also see response to comment CT 1-3.5

CT 3-14.7

Comment:

Vol. III, pp. 2-10: The statement is made that "adverse property value effects would only occur at properties with favored, or unusual aesthetic visual character....along Long Island Sound in Branford and Stonington, CT, and those along Greenwich Bay in Warwick, RI..." This statement is untrue because (a) noise and vibration can and will have an adverse effect on property values, particularly since traffic on the rail line will increase from 28 to 68 trains; (b) EMF (electromagnetic fields) have already lowered property values in other states (6 New York State judges voted 6-0 recently that the perceived threat from EMF, because it lowered property values, was cause for damages); and (c) homes in many sites and locales beyond those mentioned in the DEIS will be affected by increased noise, vibration, EMF, or the perceived threat of EMF, and an adverse visual impact, any one of which can cause a drop in property values. There are now anecdotal conversations emanating from real estate agents which relate lost sales or homes difficult to sell due to the proposed Amtrak project.

Response:

The New York State Court of Appeals in Joseph Criscola et al. v. Power Authority of the State of New York et al. (October 12, 1993) found that in the State of New York proof of the reasonableness of a fear or perception of danger is not required before a claimant can recover consequential damages for an eminent domain taking of property whose value may be affected by a perceived public fear of danger or a health risk. The Court also found that claimants bear the burden of presenting credible, tangible

evidence that a fear is prevalent and must connect any market value diminution to the particular fear. In this New York case the Court required that in a remanded proceeding, claimants present evidence that the market value of property across which power lines were built is negatively affected in relation to comparable properties across which no power lines are built. It is the general finding of this study that if the Proposed Action's effects on sensitive views and noise levels cannot be mitigated, and if public perceptions regarding EMF's remain unchanged, there could be a small effect on property values. This issue is discussed in more detail in the FEIS/R Volume I, Section 4.2.

CT 3-14.8

Comment:

Vol. I, pp. B-45 to B-50: In only two locations does the DEIS refer to endangered species and only one species--the shortnosed sturgeon--is mentioned by name. We believe a number of endangered species on the attached list will possibly be adversely affected, including the Northern Harrier, American Bittern, Shortnosed Sturgeon, Leatherback, Dwarf Wedge Mussel, Virginia River Snail, and sand plain gerardia (See Exhibit 1, List of Endangered Species). We think the added noise and vibration from a dramatic increase in the number of trains, in combination with much higher speeds, plus three years of construction near and along the rail bed, plus installation of underwater cables, will prove to be disastrous with respect to certain species. Moreover, we see adverse consequences from the above on species such as the Piping Plover, Gibnet Egret, and Whip-poor-will, classified as "threatened or of "special concern."

Response:

See response to Comment CT 3-38.47 later in this volume.

CT 3-14.9

Comment:

Vol. I, p. C-1: The statement "the FRA has encouraged the active participation of private citizens, etc." is not accurate. Until the minuscule ads were put in the local newspaper as required by law,

there was no public announcement explaining the scope and impact of this huge project. We believe a majority of citizens were not aware of this project as recently as November 1, 1993.

Response: *In addition to notices in 38 newspapers along the NEC, announcements of the meetings were sent to local radio and cable television stations. Notices were also posted in many public buildings along the corridor. Also see response to Comment CT 1-1.15.*

CT 3-14.10

Comment: Vol. I, p. 4-1: The statement "EMF results from any current traveling through a wire or electrical device" is we believe, misleading. Specifically, the EMF that is under study as a health hazard is that caused by alternating current in the 50-60 hertz range. Also, the statement "everyone is almost continuously exposed to EMF" is false and misleading.

Response: *The first statement referenced by the commenter could be phrased more accurately as "Magnetic fields result from current traveling through a wire or electrical device, and electrical fields are created by the voltage." The purpose of the statement is to point out that electrical devices people typically use as well as the electrical wiring in their homes are sources of EMF. These sources of EMF are, for the most part, operating on 60 hertz alternating current, just as the electrified train does. Many devices (including the electrified train) also generate EMF at frequencies other than 60 hertz, although the fields at 60 hertz are typically the strongest. Although the voltages and current involved in household devices are lower than those associated with the electrified train systems, there is nothing inherently different about the EMF they generate, and thus it is valid to discuss the EMF exposure from the electrified train system in the context of that generated by other electrical devices and wiring. The second statement indicates that everyone is continuously exposed to EMF which follows from the fact that all of the*

devices and wiring that we typically use generate EMF.

CT 3-14.11

Comment: Vol. 1, pp. 4-19: The statement "the consensus of the scientific community is that there is no conclusive evidence that a link between EMF exposures and cancer exists" is false and misleading. While there may be no consensus, it is clear that, excluding the "vote" of the power utilities, the neutral, unbiased science community is not sure of the public health effects of EMF. Exhibit II (enclosed) lists over 50 occupational studies and a study of 500,000 people in Sweden that linked EMF, even very low levels, to leukemia, a form of cancer. We are under the impression that EOA, DOE, and several major universities have stated that there is enough scientific evidence (e.g. damage to cells, hormonal changes, strong correlations to cancer) to warrant further studies to determine and quantify the risk to public health. Indeed, in 1990, the U.S. EPA wrote a report recommending EMF be classified as a "class B-1 carcinogen" but this recommendation was turned down although the words "possible carcinogen" were used in the EPA's final draft report. A November 24th article in the *New York Times* states, "U.S. to Begin Study on L.I. on Cancer of the Breast" and this study will consider, among other possible agents, whether EMF plays a role in breast cancer. The National Cancer Institute, the University Medical Center at Stony Brook, and the National Institute of Environmental Health Sciences are involved with the study.

Response: *The conclusions in the document reflect the results of a weight of evidence evaluation of the laboratory studies collectively, rather than focusing on individual, isolated studies. Several criteria were used to evaluate studies in the literature to develop these conclusions; whether biological changes observed in the laboratory have been replicated in other studies to demonstrate their validity, whether effects that are observed and replicated might occur at environmental levels, and whether these*

biological changes might signify adverse effects for humans. The conclusions in the DEIS/R pertaining to laboratory research are consistent with recent reviews by other scientists in the United States, Denmark, and Great Britain.

See the response to Comment CT 3-38.28 regarding the 1990 EPA draft report cited above.

CT 3-14.12

Comment: Vol. I: There is a list of homes that are visually impacted. There is no list of homes that are impacted by (a) noise, (b) vibration, or (c) electromagnetic fields.

Response: *Volume I, Section 4.4 of the FEIS/R presents a list of areas impacted by noise and vibration. As discussed in Section 4.5, EMFs were not found to have an impact on any homes.*

CT 3-14.13

Comment: Vol. I: There is a list of permits and approvals required (pg. 5-25) but we wonder if the U.S. Navy and U.S. Coast Guard should be on the list due to the fact that bridges will not be accessible for opening to permit water traffic, including submarines and barges, to pass. Also, we are under the impression that boat traffic has priority over rail traffic, which, if true, means that the Connecticut Marine Trades Association should review and approve of the necessity for more train and less boat time insofar as the five moveable bridges over navigable rivers are concerned.

Response: *The regulations governing operation of moveable bridges over navigable waterways is the responsibility of the U.S. Coast Guard. A U.S. Coast Guard bridge permit has been added to the list of permits required in the FEIS/R and their comments on the DEIS/R can be found at MC 2-3.1. Also see Response 3.4 in this volume.*

CT 3-14.14

Comment: Vol. I, page 4-39: We see no reference to ozone emissions or pollution on this page. We note, with alarm, that ozone concentrations in areas where there are

electric trains (viz. New Haven, page B-38) exceeds air quality standards (.161 ppm New Haven vs. .125 ppm, Stamford). We are of the opinion that ozone is a serious pollutant, life threatening to very young and old people and to people with breathing difficulties. If, in fact, the proposed electrification of the rail line will result in the creation of ozone through the phenomenon known as "sparking," this should be covered in the DEIS. Specifically, will this project create more ozone? If so, how much, and what effect will this have on public health?

Response: *Low level atmospheric ozone is formed by the photochemical reaction of precursor gases, NOx and hydrocarbons, in the presence of sunlight. The single largest cause of elevated ozone levels measured in urban areas is the result of the transport of ozone precursors (VOCs and NOx) into the region during the night and the photochemical reaction occurring the next day, with almost no contribution to these levels coming from initial ozone from electric discharges. The mechanism described above would occur with or without the presence of electrified trains.*

Initial ozone, formed by electrical discharges such as sparking, occurs in minuscule amounts, is very short-lived, and rapidly dissociates into oxygen atoms. The contribution of ozone emissions from transitory, electrified railroad locomotives to measured, elevated ozone concentrations is minuscule (see response to Comment CT 1-17.1).

CT 3-14.15

Comment: Perhaps the most significant omission, obviously intentional, was the issue of what to do with the crossings. It is obvious that Congress intended that the crossings, particularly closing them, be part and parcel of the Northeast Corridor Improvement Project. The Amtrak Authorization and Development Act, as passed by Congress, is quite explicit in referring to a plan for "the elimination of all highway at-grade crossings, etc. etc." It should be patently obvious to those

responsible for the DEIS that high speed rail and 15 crossings where speeds are limited to 100 MPH, where noise from sounding 4 whistles at a minimum level of 95 decibels will have an adverse consequence on the health and welfare of the people nearby (that's a total of 1,632 whistles in the Town of Stonington alone!), where there is an acknowledged increase in the risk of accidents due to a significant increase in speed at crossings (Vol. I, page 4-27), where construction of bridges and tunnels is contemplated in addition to closing most crossings (FRA Plan for Elimination of Highway At-Grade Crossing, Draft Report, 4/93) are integrally related matters and should be eliminated is a matter of record. Here is a direct quote from the FRA: "The Amtrak Authorization and Development Act of 1992 directs the Secretary of Transportation to prepare a Program Master Plan (PMP) and the Grade Crossing Elimination Plan to the Federal Railway Administration (FRA)." Another: "Because elimination of grade crossings is essential to the attainment of the travel time and safety goals specified for the PMP, the final recommendation of the Grade Crossing Elimination Plan will be incorporated into the PMP and coordinated with the other physical improvement projects identified there." Also, another FRA quote: "The elimination of at-grade crossings of the Northeast Corridor main line has long been regarded as a necessary improvement for implementation of safe, high-speed rail passenger service," and "the last at-grade crossing between New Haven, Connecticut, and Washington, DC was closed in 1982." It is clear from various documents that the crossings are an integral part of the Northeast Corridor Improvement Project and should have been covered in the DEIS. We have reason to believe that FRA, recognizing the substantial, well-to-do opposition to closing or modifying crossings, instructed the DEIS staff to exclude "crossings" and related issues from the DEIS.

Response: *The scope of this FEIS/R is limited to extension of electric traction between*

New Haven and Boston and not on NECIP as a whole. No grade crossing eliminations are proposed as part of this proposed action nor would they be required based upon the analysis of the impacts of extension of electric traction. The increase in risk referred to in the comment is an increase in the probability of an accident happening somewhere on the corridor from once every four years to once every three years. And this analysis is further recognized as providing conservative estimates with regard to NEC actual conditions. Such an increase would occur whether the Proposed Action is implemented or some form of non-electric high-speed train is operated over the corridor instead. (See FEIS/R Volume I, Section 4.8) Since the increase is minor, and not directly related to the Proposed Action, and since the grade crossing plan is not proposed to be implemented as part of the electrification project, there was no need to include the analysis of closing grade crossings in this FEIS/R.

To address another point raised in the comment, the Congressional direction to undertake the development of the crossing elimination plan did not link this plan with electrification. Indeed, it did not link it with NECIP. Section 2 of the Amtrak Authorization and Development Act which directed FRA to prepare the grade crossing elimination plan, amended the Rail Passenger Service Act (RPSA). Section 4 of this Act, which directed FRA to develop the master plan for the Northeast Corridor amended Title VII of the Railroad Revitalization and Regulatory Reform Act of 1976 (4R Act) which is the authorization for NECIP. Had Congress intended that the grade crossing plan be part of NECIP, it would have been incorporated as part of Title VII of the 4R Act and not part of the RPSA. Also see response to Comments CT 1-3.9 and CT 2-7.39 and Response 3.8.

CT 3-14.16

Comment: Vol. I, p. ES-5: The statement is made "each set of poles would be spaced approximately 200 feet apart."

Calculating 12,000 poles from another (presumed Amtrak) source and 156 miles of track, we conclude the poles will average 137 feet apart--not 200 feet--. In this same regard, we, the people, were told at a town meeting hosted by Amtrak that the poles would be "one at each location, 250 feet apart." Now it seems that there will be two at each location, 137 feet apart.

Response: According to design contractor Morrison Knudsen/L.K. Comstock/Spie Group (June 8, 1994 memorandum), the estimated 13,000 (a revised estimate since the publication of the DEIS/R) poles are spaced (in pairs) approximately 200 feet apart on straight sections of the track. Curved sections require a shorter distance between poles. The maximum pole spacing on straight track would be 220 feet and the minimum at the most severe curves is 75 feet. However, if you calculate the average (arithmetic mean) over the entire route, it comes out to roughly 127 feet between poles. The actual distance between any two poles will be due to factors such as the curvature of the track and , if appropriate, special placement to mitigate visual impacts.

CT 3-14.17

Comment Vol. I, p. ES-6: This page state that air quality will improve. We believe that the alternative will produce more pollution than the No-Build alternative if people do not shift from planes and cars to trains. This is because it is not efficient to move electricity over long distances. A gas-turbine train will, therefore, produce the same amount of energy as the proposed Amtrak Electrification project with (about) 40% less power and much reduced pollution. In fact, the Federal Motor Vehicle Emissions Control Program in combination with state inspection/maintenance programs is the primary reason accounting for a reduction in air pollution and this reduction should not be perverted in a reason why the Amtrak project is environmentally sound.

Response: Improvements in air quality that result from Federal Motor Vehicle Emissions Control Program are included in the No-Build Alternative - AMD-103 scenario (baseline). As a consequence, the air quality benefits of the Proposed Action identified in the FEIS/R are in addition to the improvements that will result from improved auto emissions. AS shown in section 4.10 of Volume I, the Proposed Action generates less pollution from rail operations than the No-Build Alternative scenarios.

CT 3-14.18

Comment: We believe the southeastern coast of Connecticut is the wrong place for high speed rail due to:

- The serpentine nature of the existing rail system.
- The probability that, down the road, the curves will have to be taken out for competitive speeds (e.g. 200 MPH) to be obtained, and this will require (if permitted) damage to the environment most importantly because in many places there is water on both sides of the tracks and not enough room for straightening out curves with great amounts of fill and excessively high costs.
- The occurrence of fog, hurricanes, and flooding along the coast.
- The five moveable bridges which, on occasion, jam in the open position, and which, if closed excessively, prevent marinas from earning a profit, boaters from enjoying Long Island and Block Island Sounds, and commercial vessels (e.g. barges) from meeting schedules, and warships (e.g. submarines) from departing Groton on a firm schedule.
- The abundance of historic places and bridges which will be adversely impacted (e.g. putting up 8 foot barriers on bridges to prevent people from getting electrocuted).

- Adverse effect on wetlands and certain species and their breeding habitats.
- The natural beauty of the coast which will be despoiled by the 12,000 catenary poles, miles of wires, and 25 various buildings to be erected (e.g. substations)_ which will be left to rust (plan is not to paint).
- The negative effect on tourism which is directly related to the beauty of the coast.
- Major safety problems including 15 crossings, 5 moveable bridges, and many older trestles. (We are told by a reliable witness that many of the bridge piers are eroded and/or eroding.) So much movement over old bridges and trestles invites disaster. And, the November 30, 1993 accident in Florida lead to a conclusion: "The accident is likely to lead to further calls for elimination of crossings on high speed routes" (Exhibit IV).

Response: *Comment noted.*

CT 3-14.19

Comment: **Endangered Species** - No mention is made of Connecticut Public Act 89-224, an act establishing a program for the protection of endangered and threatened species. Must Amtrak meet the requirements of this Act? Why not?

Response: *Connecticut Public Act 89-22A was codified under the Connecticut Endangered Species Act. The DEIS addressed the presence of state-listed threatened and endangered species, species of special concern and essential habitat through consultation with the Connecticut Natural Diversity Database at each of the facility locations including the installation of submarine cables at the five moveable bridges. The presence of the state-listed species American bittern (*Botarus lentiginosus*) was noted in the vicinity of the Stonington paralleling station. The database review*

*for the moveable bridge crossings revealed the presence of anadromous fish in the Thames and Niantic Rivers; also noted was the presence of the federally endangered species, shortnose sturgeon (*Acipenser brevirostrum*) in the Connecticut River.*

Consultation with Connecticut DEP, Marine Fisheries and Wildlife Divisions have been carried out to determine potential impacts and mitigative measures. The FEIS/R outlines seasonal restrictions proposed for the project.

CT 3-14.20

Comment: **Wildlife Value** - DEIS says that wildlife value in locales like Stonington is "moderate" despite the many species (collectively) of mammals, birds, reptiles, amphibians, fish, invertebrates, and plants that are "endangered" or "threatened." We believe experts would confirm that they have great value.

Response: *The "moderate" wildlife values assigned to the Stonington paralleling station site as well as other facilities, refers to the wildlife values available at the facility location in relationship to surrounding habitats.*

The actual loss of habitat at the Stonington site includes ledge and briar with a small amount of forested cover. The overall value of the site is associated with the diversity of cover types in the surrounding area which would not be disturbed.

The reported presence of American bittern nesting in the vicinity was also a factor. A field check by Connecticut DEP, Wildlife Division did not establish the location of the birds at this site. As a precautionary measure no construction activity will be carried out on the adjacent paralleling station site between May 1 and August 15.

CT 3-14.21

Comment: **Critical Environmental Concerns** - We were distressed to learn that the State of Massachusetts' EPA identified areas of "critical environmental concern" but

Connecticut's EPA is apparently silent on this important matter: protecting areas of critical environmental concern. And there are such areas along the coastline.

Response: *Comment noted.*

CT 3-14.22

Comment: **Alternatives** - We do not believe that alternatives, including alternative routes and alternative means of locomotion, were studied in the sense of (a) looking at all the alternatives; (b) setting up objective criteria to evaluate alternatives; (c) requiring competent experts to supply data to the criteria; and (d) providing an evaluation of each alternative using experts' data and relevant criteria. Criteria should include:

- cost
- date availability
- feasibility
- speed (maximum)
- BTU consumption (per passenger-mile)
- cost per passenger-mile
- comfort
- reliability
- effect on environment
- cost of construction
- when system operational
- elapsed time New York City to Boston

We understand that actual engineering studies were completed with respect to alternate routes and we believe any such studies should be included, without censorship, in the final EIS. We believe that there are trains running in at least five other countries (gas turbine) that meet speed criteria and do not require an investment of (perhaps) a billion dollars in catenary poles, wires, and substations. Leaving these trains out of the DEIS appears to result from the built in bias resulting when the people doing the project know the viewpoint of the agency (FRA) paying for the project. NEEDLESS TO SAY, THE PUBLIC IS ENTITLED TO SEE A CHART OR TABLE LISTING SPECIFIC ALTERNATIVES AND AN

OBJECTIVE RANKING USING REASONABLE CRITERIA TO OBTAIN THE RANKING. Finally, we note that the turbine train built by United Aircraft, since removed from service, achieved speeds up to 170 MPH as far back as 26 years ago.

Response: *See response to Comment CT 1-1.6.*

CT 3-14.23

Comment: **Economics** - In the interest of objectivity and fairness to the public, the DEIS should have spelled out (vs. the no-build alternative):

- the cost of the project, broken down by acquisition of trains, equipment, construction improvements, purchase of other trains, crossing modifications, land acquisition and estimated loss from lawsuits
- increase in profitability or decrease in losses
- return on investment
- estimate of fares (New York City to Boston)

Why shouldn't Amtrak, an organization that loses over \$1.00 for every \$1.00 it takes in (Congressional Research Bureau, Library of Congress) provide the taxpayers with estimates of the financial impact of building the electrified railroad versus the no-build alternative?

Response: *The economic analysis of this magnitude is beyond the scope of this FEIS/R. A cost-benefit analysis is not a requirement of the regulations implementing the procedural portions of NEPA [40 CFR 1502.23]. It states, in part, "For the purposes of complying with the Act, the weighing of merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations." [emphasis added] The estimated cost of the proposed electrification project is \$359 million.*

These costs and costs associated with other aspects of NECIP are presented in Table 1-1.1 of the FEIS/R. As a result of all the NECIP improvements, the NECTP (page IX-7) estimates that Amtrak's revenue would be greater than the No-Build Alternative base line and that the annual net revenue from operations between Boston and New York City would increase by \$36 million. Amtrak estimates that the Boston to New York City service will have a net contribution of approximately \$50 million annually.

Amtrak would establish fares to maximize its revenue from this service. It is impossible to predict what the fares would be 15 years in the future. However, they will probably follow the same structure as current Metroliner service between Washington and New York City. In that market, generally express fares are competitive with air fares with conventional fares somewhat lower. The NECTP, on page IX-4, lists the following fares for the service in 2010, which are based on current New York City to Washington rail fares:

	<i>Boston-NYC</i>	<i>Boston-New Haven</i>	<i>Providence-New Haven</i>	<i>Providence-NYC</i>
<i>Express</i>	\$80	\$54	\$39	\$65
<i>Conventional</i>	\$50	\$34	\$24	\$40.

CT 3-14.24

Comment: **Future Improvements** - The design of the proposed Amtrak System is comparable with a maximum speed of "up to 150 MPH" (Vol. I, page C-13). What happens when or if competitive considerations require speeds in excess of 150 MPH? Surely Amtrak is not that naive that it believes that, as in other countries, speeds over 150 MPH will be required.

Response: *As indicated above, the service planned by Amtrak will be competitive with other forms of intercity travel in the Boston to New York City corridor even without addressing improvements beyond those incorporated into the NECTP.*

It is important to note that the key aspect of competition in the transportation market place is not peak speed but trip time. To the extent that, at some future date, Amtrak and Congress determine additional reduced trip times are desirable, other investments may be undertaken, such as the Old Saybrook bypass, which could save several minutes without increasing peak speeds.

CT 3-14.25

Comment: **Conversion of Plane Passengers** - Since the majority of people riding the electrified trains in the DC to New York Corridor do so not for "speed" but for reasons of "economy," how confident can DEIS or Amtrak be that over 1.0 million people will switch from planes and cars to trains? What research is there to support the notion that over \$1.0 billion of taxpayer money should be spent by Amtrak? Isn't it true that Amtrak has a history of making inaccurate estimates of future use?

Response: *Volume I, Section 4.9 of the FEIS/R presents a discussion of the projected changes in ridership based on a reduction in travel time. This projection is based on a behavior model used to predict transportation modal choice (e.g., rail over air or auto). As with all models, it relies on certain assumptions. However, these assumptions tested when the model is calibrated using historical empirical data. Also see Response 3.9 in this volume.*

CT 3-14.26

Comment: **Electromagnetic Fields** - We believe DEIS measurements are understated and in error. They should be consistent with measurements conducted by Electric Research and Management, for DOT. Maximum mG (milliGauss) was 628 on the Washington to New York run and 305 mG between New York and New Haven.

Response: *As discussed in Volume III of the DEIS/R, Section 5.4.1, electromagnetic fields are dynamic and directly related to the magnitude of nearby electric currents. In addition, EMFs from*

various sources and locations can interact with each other (Section 5.6). Due to the complex (eg., number of potential sources) under which EMFs are created and due to the rapid decay of EMF over short distances, field strengths will vary significantly from location to location and from facility to facility.

The value of 628 mG cited in the question was for a 25 Hz 12.5 kV single catenary which is different in configuration for that of the proposed project. The proposed project's configuration (60 Hz, 2 X 25 kV) is expected to produce significantly lower EMF intensity levels than 628 mG because it is at a higher voltage (and therefore lower current) and because it is a "balanced" design as described in the DEIS/R text (thereby having a higher potential for EMF phase cancellation). For these reasons, we believe an EMF value of 628 mG is inappropriate for use in the EIS/R.

CT 3-14.27

Comment: **Noise** - The existing noise levels (page 4-10, Vol. I, DEIS) are significantly understated. Actual noise levels as far away as 700 feet from the track now average 90 decibels. Don't the Amtrak regulations require whistles (horns) at crossings to be "no less than 95 decibels"?

Response: The "existing noise levels" referred to on page 4-10 of DEIS/R Volume I are included in Table 4.2-2, which is intended to describe the train noise impact criteria. These criteria are based on the existing noise level in terms of L_{dn} or L_{eq} (24) which are 24-hour measures of noise exposure. Thus, the columns headed "Existing Noise Level" provide the basis for the limit on noise level increase, and do not represent actual measured maximum train noise levels. As reported in Section 3.4 of the FEIS/R, maximum existing train noise levels were measured to range from 72 dBA to 114 dBA at monitoring sites located 25 to 105 feet from the near track of the Northeast Corridor.

The Federal Railroad Administration's 1991 Audible Warning Device regulation (Code of Federal Regulations No. 49, Part 229, Paragraph 129) specifies a minimum locomotive horn sound level of 96 dBA at 30.5 meters (100 feet) forward of the locomotive. However, measurements along the Northeast Corridor indicate significantly higher noise levels for Amtrak locomotive horns, with noise levels averaging about 108 dBA at a distance of 50 feet corresponding to 102 dBA at a distance of 100 feet. Although possible under some conditions, it is unlikely that train horn noise levels are normally as high as 90 dBA at a distance of 700 feet from the tracks.

CT 3-14.28

Comment: **Utility Encroachment** - It appears that Northeast Utilities has purchased the right to erect towers with power lines on the Amtrak right-of-way. Huge, ugly towers, a depressant to property values, with 345,000 volt lines throwing off electromagnetic radiation, have already been erected west of New Haven in communities like Westport and Southport. Should the DEIS have taken into consideration what happens to the ecology of the region if Northeast Utilities brings these towers up the coast through Groton and Stonington?

Response: The comment is in error. No utility has acquired the right to erect towers with power lines along the Amtrak right-of-way in the study area. The catenary support system which Amtrak has designed for the New Haven-Boston rail line cannot support the attachment of additional electrical transmission facilities. Thus, any use of the Shore Line rail route as an electrical utility corridor would require construction of new electrical facilities by the utility company and would be subject to strict environmental and siting council regulation and review. In a letter from Richard Hill of Amtrak, dated June 10, 1994, Amtrak stated that it believes it will be virtually impossible for an electrical utility to obtain state permission to construct new electric

transmission facilities along the rail line. In any event, there have been no discussions with Amtrak about use of the rail line for electricity transmission and there are no plans by Amtrak to pursue this business. With regard to any use of the right-of-way west of New Haven utilities, it should be pointed out that in this area the right-of-way is owned by the State of Connecticut, not Amtrak.

CT 3-14.29

Comment: **Financial Review** - Has the Congressional Budget Office reviewed Amtrak's or FRA's estimate of cost (to taxpayers) for this project?

Response: No.

CT 3-14.30

Comment: **Freight** - Will this electrification project result in cost increases on freight carriers?

Response: *The mitigation included in the Proposed Action in Section 5.1.1(i) of the FEIS/R will prevent any significant impact from this project on freight service. As a consequence, this project should not result in cost increases to freight carriers.*

CT 3-14.31

Comment: **Bridges** - Have the piers been inspected and x-rayed? We believe that more trains at high speeds will result in the collapse of one or more bridges.

Response: *See response to Comment CT 1-2.9.*

CT 3-14.32

Comment: **United Aircraft Turbo-I** - You should compare performance characteristics of the trains to be used by Amtrak with this and other trains that can be manufactured in the United States.

Response: *Technology alternatives are discussed in the FEIS/R, Volume I, Sections 2.2.2, 2.2.3, 2.3.2, 2.4.1 and carried forward into Chapter 4 in the context of the FF-125 and FRA-150 scenarios. The United Aircraft Turbo-I is discussed in Section 2.4.1(b). As noted in that section, the United Aircraft TurboTrain was retired*

by Amtrak in 1975 and by Canadian National in 1979. Its capabilities, however, were considered in preparation of the alternatives analysis in the PEIS for NECIP and in the FEIS/R.

CT 3-14.33

Comment: **Power Used** - The DEIS is deficient in that the following information is not supplied, at least not in a coherent, understandable format. The above table [showing Proposed Action, Proposed Action with 50% of predicted passengers, and No Build for the following: Gallons of oil required; Cubic feet of gas required; BTU's from nuclear power; Tons of coal required; Total BTU's consumed; Tons of CO₂ generated; Kg's CO generated; Kg's NOx generated; Kg's VOC generated], unlike the one in Vol. I, pp. 4-40 and 4-41, should exclude the effect of the Federal Motor Vehicle Emissions Program (FMVEP) and the State Inspection and Maintenance Programs (IMP). It is unfair and unethical to attribute cleaner air to the Amtrak program when in fact the Amtrak Electrification Program, in the absence of FMVEP and IMP, would not create any improvement in air quality.

Response: *Volume I, Section 4.6 of the FEIS/R presents a revised discussion of the energy use for all alternatives. The request for an analysis of the Proposed Action with a 50 percent reduction in passengers is not appropriate as there is no data to support this assumption in passenger demand, however such numbers can be calculated from the data contained in section 4.6. It is incorrect to state that the DEIS/R gives credit to the Amtrak electrification project for the impact of the FMVCP and state Inspection and Maintenance (I/M) programs because the above referenced tables are comparing 2010 no-build with 2010 electrification -- both of which are given credit for the impact of the FMVCP and I/M programs.*

CT 3-14.34

Comment: **Parking** - It appears that the DEIS says there will be 1.8 million more people

taking the train annually. What increase in revenues will this translate to and where will these people park? Is the cost of creating new parking facilities in the cost estimates generated by FRA?

Response: See response to Comment CT 2-7.59.

CT 3-14.35

Comment: **Use of Wetlands** - We do not concur with the DEIS position that Old Lyme and State Line paralleling stations are not being built on wetlands.

Response: *The Old Lyme, State Line and Millstone paralleling stations are identified on local wetland maps and state soil surveys as occurring on wetlands. Field conditions did not support this data, as documented in Volume II, Chapter 8.*

CT 3-14.36

Comment: **EMF at Stations** - We would like to know EMF levels currently in Stamford, New Haven, and Philadelphia railroad stations (for people waiting for trains).

Response: *EMF levels on the trains station platforms in New Haven and New Rochelle are presented in Volume III, Section 5.5.6 of the DEIS/R. This data was adjusted to reflect the proposed NEC electrification voltage. No data was gathered regarding EMF levels at train stations in Stamford or Philadelphia, and we are not aware of any existing data for these locations.*

CT 3-14.37

Comment: **Feasibility of a 3-Hour Trip** - The DEIS is deficient in that it does not (a) state speeds necessary to achieve Amtrak's goal of a 3-hour trip from New York City to Boston or (b) what is Amtrak's current on-time performance? Can we see a table showing speeds between stations, including maximums and minimums, and how much time is spent at each station?

Response: *The Train Performance Calculator (TPC) simulations, which show the speeds and times for travel along the entire NEC, for this project are available for public review at the Volpe Center in Cambridge*

or at FRA's office in Washington, DC. In addition, Volume I, Section 4.8 of the FEIS/R presents a table with the proposed maximum allowable speeds for the Proposed Action.

In 1993 and 1994, to date, Amtrak's Boston division on-time performance has averaged better than 93%.

CT 3-14.38

Comment: **Lost Jobs** - We believe DEIS' estimate of 1.2 passengers diverted from Logan Airport will create job losses at Logan Airport.

Response: *As Logan Airport growth is expected to increase in spite of this diversion, no net job loss is predicted. The only loss would be an opportunity loss for potential jobs.*

CT 3-14.39

Comment: **Impact on Boats** - The DEIS report is deficient in that it does not show the decrease in time available for boats to pass by movable bridges, e.g., what will that percentage be in 1998 if 68 trains use the route, as planned?

Response: *See Response 3.4 in this volume.*

CT 3-14.40

Comment: **Accuracy** - We believe Table 5.2-1 in Volume 1 (pp. 5.5-5.13) understates the impact of the Project, particularly with respect to the number of homes impacted. Also, this table lists "alternatives for migration," but the cost of these alternatives is not in the budget, meaning there are no funds to implement DEIS' solution to many environmental problems mentioned in this section of the DEIS.

Response: *The EIS/R is a document which identifies impacts and benefits of the Proposed Action in comparison to all reasonable alternatives. It also provides a discussion of appropriate measures to mitigate any impacts of the proposed Action. The mitigation measures required as part of this project are identified in Chapter 5 of the FEIS/R and will be funded from appropriations for*

the electrification project.

CT 3-14.41

Comment: **Construction Contamination** - There seems to be no mention specifically of what contamination will occur during the construction phase. Will there be any dangerous contaminants (i.e., dangerous to public health) such as PCB's? Please name the contaminants resulting from the construction phase of the project.

Response: *Volume I, Section 4.13 of the FEIS/R addresses the issue of hazardous waste generation from the Proposed Action.*

CT 3-14.42

Comment: **Bridges** - How many of these bridges have been inspected in the last 5 years? How many of the 225 bridges (pp. 1-7, Vol. I) require replacement or repairs and is this in the budget?

Response: *Amtrak inspects all of its fixed bridges annually and all moveable bridges quarterly. No bridge improvements are required or included as part of this Proposed Action. Such improvements are recognized in the NECTP and can be found in Table 1-1.1 of the FEIS/R. See response to CT 1-2.9.*

CT 3-14.43

Comment: **New England Economy** - We know that the gradual decline in business property in New England led to the demise of the New York, New Haven and Hartford Railroad. The business growth regions of the country are in the southeast and southwest United States. Is the Boston-New York corridor the best place to invest billions of (railroad and taxpayer) dollars?

Response: *This comment is beyond the scope of the environmental analysis of the Proposed Action.*

CT 3-14.44

Comment: **Buried Remains** - There are several references to "disturbing buried remains." Are these Native American remains? The EIS should state whose remains are being disturbed.

Response: *The term "buried cultural remains" in the DEIS/R refers to archeological artifacts, not human remains. Subsequent to the publication of the DEIS/R, a subsurface archeological survey was performed at these sites and no intact cultural remains were located.*

CT 3-14.45

Comment: **Teleconferencing** - No mention is made of the fact that teleconferencing is expected to reduce the need for (business) travel.

Response: *It is not possible to reliably quantify the impact on business travel that new communication technology will have on business travel, just as it is not possible to reliably quantify the potential of clean electricity production. Therefore, current levels were assumed for the purposes of analysis.*

CT 3-14.46

Comment: If 1.8 million people do not switch out of cars and planes and ride the trains, (contrary to the DEIS statements) there will be a significant decline in air quality as compared to the no-build alternative.

Response: *Regardless of the realized diversion from air and auto travel to rail, air quality would still improve due to the elimination of diesel locomotives for Amtrak passenger service. See also response to Comment CT 3-14.17 and Volume I, Section 4.10.*

CT 3-14.47

Comment: The Amtrak Plan requires the equivalent of a new power plant (or other unused capacity from existing power plants). Oil is the predominant fuel per Volume III of the DEIS. The power generated results in (approximately) one million tons of carbon dioxide (CO₂) being dumped into the atmosphere. It takes 80 million trees to absorb this much CO₂. Where does the DEIS mention the effect of Amtrak's plan on the Greenhouse Effect?

Response: *See response to Comment CT 3-38.17 for a discussion of air quality issues. There is no regulatory mandate for this project*

to demonstrate CO₂ mitigation.

CT 3-14.48

Comment: Electricity transmitted through miles and miles of underground and overhead wires is an inefficient system. Why? It takes more power and more fuel to provide electricity over distances than at the source. So, compared to the no-build or gas-turbine alternatives, the Amtrak Plan is less cost efficient, burns more (imported) oil, and creates more pollution, CO₂ included.

Response: *This comment fails to acknowledge that power plants are more efficient producers of electricity than locomotives and that pollution control technology is more effective on power plants than on locomotives. The energy and air quality analysis does compare the Proposed Action against the performance of existing gas turbine trainsets as represented in the No-Build FF-125 alternative. In this comparison, the Proposed Action consumes less energy and generates fewer of the air pollutants monitored by the States as part of the State Implementation Plans prepared pursuant to the Clean Air Act.*

CT 3-14.49

Comment: The DEIS assumes that people will switch from airplanes and, therefore, there will be a drop in pollution due to (i) fewer cars and buses at airports and (ii) fewer airplanes, hence fewer emissions. Of course, if people don't switch, the Amtrak Plan creates more pollution than the no-build alternative. And, DEIS should leave out of its air quality data upper atmospheric pollution, that is pollution above 20,000 feet from airplanes flying at 20,000 feet or higher.

Response: *See response to Comment CT 3-14.17 with respect to a comparison of No-Build and Build emissions if people do not shift from planes and cars.*

In the Air Quality analysis performed in Technical Study 10 of the DEIS/R, upper atmospheric emissions from aircraft were not estimated or counted. Emissions from aircraft up to only 3000 feet were deemed

necessary to be evaluated and were accounted for in the analysis.

CT 3-14.50

Comment: If, as DEIS states, electrifying the rails results in improved air quality, why is it that cities where Amtrak has electrified the railroad (Washington, Philadelphia, New York) have higher levels of pollutants than cities where there is no electrification (Providence, Boston, New London)?

Response: *In large cities such as Washington, Philadelphia, and New York, local pollution sources such as automobiles, utilities, and factories dominate the emissions burdens and thus the measured pollutant concentrations. Since the electrified trains have no pollutant emissions except for minute amounts of ozone (see response to Comments CT 1-17.1 and CT 3-14.14), the presence of the electrified railroad has an insignificant impact on the overall measured pollutant levels in urban areas.*

CT 3-14.51

Comment: The fact is that using gas-turbine trains, which require no elaborate, billion dollar support system, results in cleaner air. The DEIS should so state!

Response: *See response to 3-14.48.*

CT 3-14.52

Comment: The DEIS includes in its numbers the effects of federal and state regulations which will be going into effect in the near future. This misleads the reader into thinking that the Amtrak Plan is responsible for cleaner air when the truth is that the cleaner air is primarily a function of new federal regulations, not the Amtrak Electrification Plan.

Response: *See response to Comment CT 3-14.33.*

CT 3-14.53

Comment: The trains Amtrak is planning to use create ozone. The DEIS should comment on the quantity of this major pollutant that is created by the Amtrak Plan.

Response: See responses to Comments CT 1-17.1 and CT 3-14.14.

Mystic Nautical Heritage Society

CT 3-15.1

Comment: The DEIS does not seem to address the effect on boat traffic in the Mystic River.

Response: See Response 3.4 in this volume.

Mystic River-Whitford Brook

CT 3-16.1

Comment: If travel to New York or Boston is for access to other domestic or international flights, then entry to these cities may continue to be most convenient directly through those airports. There is no discussion of this issue.

Response: In projecting the future number of Boston-New York air travelers who might potentially be attracted to improved rail service, those connecting to flights destined for cities outside the corridor were excluded. Projected diversions from air travel to improved rail service apply only to those air passengers whose trip origins and destinations both lie within the corridor.

CT 3-16.2

Comment: Second, the issue of parking to accommodate the increased usage of trains is not fully considered.

Response: See response to Comment CT 2-7.59.

CT 3-16.3

Comments: Will reductions in travel by air actually reduce the number of flights, resulting in a substantial savings of fuel? Or will the number of flights remain stable or increase due to an overall increase in population?

Response: Reductions in the number of scheduled flights may not be as large as projected reductions in the number of air passengers, since airlines seek to maintain frequent departures in order to attract travelers with flexible or uncertain schedules. For example, the frequency of departures on New York-Boston air shuttle services is only partly determined by overall passenger

volumes, as airlines seek to maintain hourly departures to serve business traveller. However, air carriers are ultimately likely to respond to changes in air travel demand by eliminating departures scheduled at less desirable times or by employing smaller aircraft. Both of these responses will reduce aircraft fuel consumption.

CT 3-16.4

Comment: The electrification of the Northeast Corridor may simply provide rationale for further encouraging immigration to the Washington/Boston megalopolis, with all the attendant social problems.

Response: Comment noted.

CT 3-16.5

Comment: Additional railroad bridge closures, due to the projected increase in number of train trips, will greatly reduce the time available for vessels to move up and down rivers.

Response: See Response 3.4 in this volume.

CT 3-16.6

Comment: The use of barriers to mitigate noise and vibration impacts requires more detail.

Response: Volume I, Sections 4.4 and 5.1.1(d) of the FEIS/R contain additional discussion of potential noise and vibration impacts and mitigation. Also see Response 3.6 in this volume.

CT 3-16.7

Comment: The burial of power cables across rivers may have impacts on the movements of fishes and crustaceans.

Response: No impacts are anticipated from this activity. Volume I, Section 4.12, discusses the issue of underwater cable installation on fish.

Mashantucket Land Trust

CT 3-17.1

Comment: Two of these properties [Mashantucket Land Trust preserves] would be affected by changes in at-grade railroad crossings and all of these properties contain wetlands, either salt marsh, inland

wetlands or both. This is contrary to Table 3, Appendix A DEIS/R vol III.

Response: Volume III, DEIS, Appendix A, Table 3

Corrections to the table include the following:

*Leetes Island - yes
Madison - buffer zone
Noank - buffer zone*

Old Lyme - to be reclassified

State Line - to be reclassified

The differences in opinion on this data are based on the distance to wetlands. We considered the buffer to be 100 feet, and some of these sites are over 100 feet to wetlands. On the Leetes Island site, an on-site wetlands was flagged after the DEIS/R was published.

The Old Lyme and State Line sites are mapped as poorly drained soils or "wetlands" on local or state maps. Field conditions indicated these areas do not contain poorly drained soil. documentation is provided in Volume II, Chapter 8. As discussed elsewhere, no changes to at-grade crossings are proposed as part of this project.

CT 3-17.2

Comment: Protected open spaces owned by the Trust do not appear on the table of Land Uses Adjacent to the Northeast Corridor Rail Line under "sensitive receptors", (Table 3.1-1, Appendix B. DEIS/R vol. I) nor are they recognized on any DEIS/R map (Groton, CT to Stonington, CT, Sheet 9 of 29).

Response: *This error has been corrected in the FEIS/R.*

JOCR Research

CT 3-18.1

Comment: We do not agree with the prejudgment that to raise the existing main causeway Salt Acres private road (the Task 20 recommendation as an alternative solution) would be very difficult vis-a-vis obtaining environmental permits.

Response: *This comment letter is regarding the elimination of a specific at-grade crossing contained in the Northeast Corridor Transportation Plan. Therefore, it is not within the scope of this study. See Response 3.8 in this volume.*

Bayreuther Boat Yard

CT 3-19.1

Comment: An increase in the closure rate during this summer time would cause our business to lose customers.

Response: *See response to Comment CT 1-4.2 and Response 3.4 in this volume.*

Mystic Marine Basin

CT 3-20.1

Comment: Since we are located north of the railroad bridge on the Mystic River we are fully aware of the devastating effect that a 200-300% increase in train traffic will have on our marina.

Response: *Comment noted.*

CT 3-20.2

Comment: What will happen to the 25,000 volt cables when boat masts, tree limbs, etc., come into contact with the wires.

Response: *When moveable bridges are open, the catenary will not span the waterway, therefore to prospect that a boat mast could come in contact with the catenary is remote. Falling tree limbs could cause the system to short out. As a consequence, Amtrak will keep trees in the vicinity of the rail line trimmed.*

CT 3-20.3

Comment: The question of the connection of electromagnetic fields to an increase of some forms of cancer has not been answered.

Response: *See Response 3.5 in this volume.*

CT 3-20.4

Comment: For example, it should be proven that laying high voltage cables underwater will not adversely affect the flow and spawning of fish on the rivers in question.

Response: *See response to Comment CT 3-16.17.*

CT 3-20.5

Comment: There are alternatives to this current proposal. We strongly urge that more time be given in exploring these alternatives and take into consideration the devastating effect the current proposal will have on SE Connecticut's environment and economy.

Response: *See response to Comment CT 1-1.6.*

Mystic Seaport Museum

CT 3-21.1

Comment: We could be seriously affected by any reduction in boat traffic on the Mystic River which restricted openings of the railroad drawbridge may cause.

Response: *Section 4.2.3.1 in Volume I of the DEIS/R discusses the anticipated effect of electrification on tourism. Potential impacts to marine traffic and associated mitigation are discussed in Volume I, Sections 4.2, 4.9 and 5.1.1(i) of the FEIS/R. A summary of this section is included at the beginning of Volume III.*

Mystic Chamber of Commerce

CT 3-22.1

Comment: Of immediate concern is the increased demand for the bridge closures which will significantly impact the passage of boats and land vehicles.

Response: *See Response 3.4 in this volume.*

CT 3-22.2

Comment: Of additional concern is the restructure of rail crossings in the Mystic area and the potential effect on traffic flow and visual impact.

Response: *See Response 3.8 in this volume .*

CT 3-22.3

Comment: It has also been mentioned that freight traffic on the rails will be disrupted by the proposed electrification plan.

Response: *See Response 3.3 in this volume.*

Ledge Light Health District

CT 3-23.1

Comment: I would like to formally request that the public comment period for the draft environmental statement for the electrification of the Amtrak lines be extended ninety (90) days.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Mystic Environmental Design

CT 3-24.1

Comment: I have serious concerns about the adequacy of the current impact study's Technical Report #3, which pertains to historic resources.

Response: *Throughout the project development process, the FRA has been consulting with the Connecticut Historic Preservation Commission (CTHPC) regarding the identification of historic resources along the ROW, their National Register eligibility, potential project effects and mitigation for adverse effects, pursuant to the requirements of Section 106 of the National Historic Preservation Act of 1966, as discussed in Volume I, Sections 3.3 and 4.3 of the FEIS/R.*

CT 3-24.2

Comment: As such, it can be inferred from that report that an ongoing Section 106 design review process will not be required. This I object to. These right of way improvements -- be they landscaping, public access points, appropriate fencing or whatever -- should be developed by the full and due process of the Section 106 requirements of the National Preservation Act.

Response: *FRA has undertaken Section 106 consultation with the Connecticut State Historic Preservation Officer (SHPO) regarding the identification of eligible historic properties, the effects of the project on those properties, and measures to mitigate adverse effects. FRA and the SHPO have entered into a memorandum of agreement pursuant to Section 106.*

CT 3-24.3

Comment: In many cases this may be true, but to cite just one example, this statement is absolutely incorrect with respect to the historic village of Mystic in the Town of Groton and of Mystic Bridge in the Town of Stonington.

Response: *The FEIS/R addresses the effects of the project on both historic resources.*

CT 3-24.4

Comment: This would entail acoustic retrofitting of hundreds of historic houses in the Mystic districts alone. Yet, Technical Report #3 finds no adverse impact.

Response: *As noted in Volume I, Chapter 5 of the FEIS/R, acoustical insulation is only one of several options to mitigate noise impacts. No historic structures are anticipated to undergo acoustical retrofitting as part of this project.*

CT 3-24.5

Comment: Technical Report #3 failed even to include in its inventory of affected historic resources the entire Mystic Bridge Historic District, which comprises hundreds of structures and abuts the rail corridor in the Town of Stonington.

Response: *The FEIS/R addresses the project's effects on the Mystic Bridge Historic District, and the maps have been revised accordingly. Executive Order No. 11593 does not require the nomination of eligible properties to the National Register unless they are owned by federal agencies.*

CT 3-24.6

Comment: Maps delineating impacted historic resources were prepared as part of a much earlier study, and are out of date, incomplete, and not even consistent with the inventory of resources which resulted as part of the current impact study. Along with the Mystic Bridge historic district, both my own residence and those of my neighbors are mysteriously absent from the inventory of potentially impacted historic properties.

Response: *See response to Comment CT 3-24.5.*

CT 3-24.7

Comment: In addition, my residence maintains what should be considered by the impact study a significant view -- a view down the Mystic River all the way to Fishers Island, and a view through which the rail corridor runs.

Response: *Although the Mystic Bridge Historic District includes some properties along Jackson Avenue, it does not extend to the railroad right-of-way; the nearest point in the district is approximately 200 feet to the north. Neither the railroad right-of-way nor the waterfront constitutes an important part of the visual setting of this district, so the installation of the catenary was not regarded as an adverse effect.*

Crocker's Boat Yard

CT 3-25.1

Comment: This new proposal is absolutely intolerable and would be extremely disastrous to our business.

Response: *See response to Comment CT 1-4.2 and Response 3.4 in this volume.*

Gales Ferry Marine, Inc.

CT 3-26.1

Comment: With the proposed increase to over 50 trains per day, or one every 18-20 minutes, the access to our boatyards and marinas could very well be ended completely.

Response: *See response to Comment CT 1-4.2 and Response 3.4 in this volume.*

CT 3-26.2

Comment: Proposals to dredge the Thames river to allow increased traffic and a home berth for the Coast Guard's boats will be negatively impacted by the Amtrak proposal.

Response: *The submarine cable proposed for the Thames River will be placed in a trench below the river bottom. It will not impact any dredging activities.*

Hellier Yacht Sales

CT 3-27.1

Comment: It will become extraordinarily difficult if not nearly impossible for boaters to leave their boatyards to gain access to Long Island Sound.

Response: *See response to Comment CT 1-4.2 and Response 3.4 in this volume.*

Jeanneau (N.A.)

CT 3-28.1

Comment: I urge you to consider the very negative impact the electrification of the North East Corridor will have on the marine industry.

Response: *See Response 3.4 in this volume.*

Essex Island Marina

CT 3-29.1

Comment: The proposed increase in the number of trains per day will greatly inhibit the ability for openings and negate the possibility of navigation.

Response: *See Response 3.4 in this volume.*

CT 3-29.2

Comment: With no [express] service scheduled for the Old Saybrook and New London stations in the Amtrak proposal, I feel improvement is not achieved.

Response: *See response to Comment CT 1-3.5.*

CT 3-29.3

Comment: The Shoreline East and Providence/Worcester freight railroads will experience an adverse effect as their use of the upgraded rails is in question.

Response: *See Response 3.3 in this volume.*

Deep River Marina

CT 3-30.1

Comment: Should this increase to over fifty trains (150%) or one every 18-20 minutes, I would expect an extremely negative impact on my business as well as on many other businesses in this area.

Response: *See response to Comment CT 1-4.2 and Response 3.4 in this volume.*

Citizens Against Amtrak Electrification Project

CT 3-31.1

Comment: It has recently come to my attention that Amtrak now proposes to erect a third track in Connecticut to accommodate the freight trains.

Response: *Following publication of the electrification DEIS/R, the State of Rhode Island initiated a DEIS evaluating alternatives for improving NEC freight service between Davisville and Central Falls, R.I., including possible construction of a third track parallel to the Amtrak mainline for local freight operations and potential future commuter rail service. This proposal is discussed in Volume I, Section 4.9 of the FEIS/R.*

CT 3-31.2

Comment: Please consider also the fact that the DEIS as it stands now is completely remiss in its responsibility in discussing alternate routes.

Response: *See Response 3.1 in this volume.*

CT 3-31.3

Comment: Amtrak acknowledges that with newer technology these tracks will very quickly become obsolete.

Response: *When contacted regarding this statement Amtrak reported, "The Shoreline route will never be obsolete -- maintenance of the line for commuter and freight service is essential to serve existing shippers and population centers. Given the cost and environmental concerns related to any realignment of the mainline tracks, Amtrak expects that the Shoreline routing will remain the primary intercity rail line for Amtrak for the long-term future."*

Intl. Brotherhood of Elec. Workers (IBEW)

CT 3-32.1

Comment: This commenter is generally in support of the proposed action.

Response: *Comment noted.*

Cranmore, Fitzgerald & Meaney

CT 3-33.1

Comment: There is no mention on the Statement of the serious impact on marine traffic on

the Connecticut, Niantic, Thames and Mystic rivers as a result of the electrification project.

Response: *See Response 3.4 in this volume.*

CT 3-33.2

Comment: Further, as was made clear by a representative of the Providence and Worcester Railroad, there will be no freight train traffic possible along the corridor during said hours because there simply is no window of time available for such traffic.

Response: *See Response 3.3 in this volume.*

CT 3-33.3

Comment: In the statement, electromagnetic field radiation is dealt with in one sentence.

Response: *The EMF technical evaluation was updated in the FEIS/R. This evaluation is contained in Volume I, Section 4.5, and summarized in Response 3.5 at the beginning of this Volume. Volume III of the DEIS/R which has been placed in town libraries along the NEC, also contains more detailed technical information.*

CT 3-33.4

Comment: There is no empirical information that suggests that people are going to take the train because of an approximately 55 minute time savings.

Response: *Volume I, Section 4.9 of the FEIS/R presents a discussion of the projected changes in ridership based on a reduction in travel time. This projection is based on a behavior model used to predict transportation modal choice (e.g., rail over air or auto). As with all models, it relies on certain assumptions. However, these assumptions are tested when the model is calibrated using historical empirical data. Also see Response 3.9 in this volume.*

CT 3-33.5

Comment: There is no basis in the report for any of the assumptions used in pertaining to ride usage.

Response: *See response to Comment CT 3-33.4.*

CT 3-33.6

Comment: The alternatives to the coast line route are not adequately discussed in the Statement.

Response: *See Response 3.1 in this volume.*

CT 3-33.7

Comment: Not only will marine traffic be interrupted but highway and local road traffic likewise will be affected.

Response: *Potential impacts to marine traffic and associated mitigation are discussed in Volume I, Sections 4.9 and 5.1 of the FEIS/R. A summary of this section is included at the beginning of Volume III. Potential traffic impacts are discussed in Volume I, Section 4.9.*

CT 3-33.8

Comment: What is not mentioned is that none of these jobs will be created in Connecticut. In fact, the negative impact of closing the rivers to marine traffic and preventing freight service will likely cost Connecticut hundreds of jobs.

Response: *Volume I, Section 4.2 of the FEIS/R discusses potential employment impacts in Connecticut.*

O'Brien Law Offices/Johnstone Partnership

CT 3-34.1

Comment: Chesebrough private railroad crossing should be referenced and included in Volume I of the draft EIS, Table 4.4-4, Table 4.4-7, Table 4.8-2, Figure 5.2-1, Table 3.8-1, Table 3.9-7, Table 3.11-1, Volume III of the DEIS, Table A-4, Figure 11 on page A-10; Table 8-1, page 8-3; Table 8-6, page 8-10; Table 9-25, page 9-42; and Table 9-26, page 9-43.

Response: *These errors have been corrected in the FEIS/R.*

CT 3-34.2

Comment: The failure of the EIS to address the environmental impacts on the Chesebrough private railroad crossing constitutes a legal insufficiency in the EIS and must be corrected before the

final report is issued.

Response: See response to Comment CT 1-2.6, CT 3-14.15 and Response 3.8 in this volume.

Conway & Londregan/Town of Stonington

CT 3-35.1

Comment: By letter of August 16, 1993, the Town of Stonington had gone on record opposing the closings of grade crossings.

Response: See Response 3.8.

CT 3-35.2

Comment: The impact of this project threatens the citizens of the Town by increased noise, vibration, and the unknown health hazards from an electromagnetic field that will be created by the installation of the power lines.

Response: Volume I, Sections 4.4, 4.5 and 5.1 of the FEIS/R discusses potential noise, vibration, and EMF impacts and mitigation, respectively. These discussions are summarized at the beginning of Volume III.

CT 3-35.3

Comment: Many vistas will be blocked by the construction of the huge power lines.

Response: Potential visual impacts resulting from construction of the overhead catenary system are discussed in Volume I, Section 4.11 of the FEIS/R.

CT 3-35.4

Comment: Furthermore, the electrification project will have untold effect on an extensive list of wildlife and endangered species habitat of which is along the coastline.

Response: Potential impacts to natural resources and recommended mitigation are discussed in Volume I, Section 4.12 and 5.1 of the FEIS/R.

CT Fund for the Environment

CT-3-36.1

Comment: The DEIS/R fails to adequately analyze the possible effects of the proposed service's effects on current commuter rail service.

Response: See response to Comment CT 2-2.5. It is

a conclusion of this analysis that with the incorporation of the mitigation contained in Section 5.1.1(i), there will be no significant impact on commuter services.

Citizens Against Amtrak Electrification Project

CT 3-37.1

Comment: Is there any danger if electrocution to birds, marine life, animals, or humans from the power lines to be installed for the Amtrak Electrification Project?

Response: The potential danger of electrocution to birds, marine life and animals is considered to be limited given the following information.

- The overhead catenary system wires are suspended approximately 21 feet above the railroad tracks.
- At the five moveable bridges, the cable will be buried under 7 feet of river bottom sediments, limiting potential contact.
- Electrocution would require phase to phase or phase to ground contact.

Given these constraints, only birds would have access to the wires and direct contact between two wires would require a wingspread of over 10 feet. Therefore it is assumed that there is little if any danger of electrocution to birds, marine life, animals or humans.

Citizens Against Amtrak Electrification Project

CT 3-38.1

Comment: Mention is made of (some) alternative means of locomotion but there are no comparisons of data relevant to which means is best.

Response: See Response 3.2 in this volume.

CT 3-38.2

Comment: Where are the studies of alternate routes that are referred to in the DEIS and how do alternate routes such as the air route, via Hartford route, and near Route 95 route between Old Saybrook, CT and Kenyon, RI, compare on the basis of cost, effect on public health, ultimate passenger fares, time and length of trips,

long-term maintenance expense, effect on the environment, effect on wildlife, and ability to carry future trains at speeds necessary to remain competitive with the Boston-New York City air shuttle as well as to recognize advances in technology?

Response: *See response 3.1 in this volume.*

CT 3-38.3

Comment: Further, we believe that burdened with excess capacity, the electric utilities, Hydro Quebec included, have exercised undue influence on Amtrak.

Response: *No support for this allegation could be found. Research into the history of the Northeast Corridor shows that extension of electric traction has been the consistent recommendation of studies for over 30 years, some of which predate the creation of Amtrak. (See Section 1.2 in the FEIS/R.).*

CT 3-38.4

Comment: Lastly, the comments of elected officials that the Amtrak Plan is a "done deal" seems to support our belief that the DEIS, paid for with funds from a sponsor of the Amtrak Plan (FRA), did not meet the standards set by NEPA.

Response: *Funds for this FEIS/R came from appropriations to FRA for the electrification project. The use of program funds to undertake necessary NEPA reviews is consistent with Federal agency practice throughout the government. There is no support for the commenter's conclusion that the use of such funds somehow affects the validity of this FEIS/R.*

CT 3-38.5

Comment: From anecdotal conversations with knowledgeable people, we sense that there will be a net loss of jobs in Connecticut, not a gain. We believe that impact on New Haven will exceed 100 jobs, not the 51 claimed in the DEIS.

Response: *The study predicts only 28 net jobs will be lost in Connecticut as a direct result of this project. It also predicts that*

several hundred jobs will be gained in Connecticut during NECIP construction. Volume I, Section 4.2 of the FEIS/R discusses employment impacts and benefits in Connecticut resulting from the project.

CT 3-38.6

Comment: It is not scientifically valid to compare the earth's magnetic field to electromagnetic fields (EMFs) created by the Amtrak project. The earth's field is not 60 Hz and not alternating current.

Response: *The comment is acknowledged. Time varying and static fields are different and are separate issues for purposes of biological and health changes. The comparison has been made merely for the purpose of providing perspective on the magnitude of magnetic fields discussed in the DEIS/R.*

CT 3-38.7

Comment: The DEIS' statement and conclusion that, since EMF generated by the Amtrak project is one-one thousandth of health standards, there is no public hazard, ignores conclusions of universities and scientists studying EMF to the effect that low levels of EMF may be more harmful than high levels. Carnegie Mellon, an institution which has a department studying EMF, has declared "there is clear evidence that fields (EMF) can produce hormonal changes" and "possible risks include cancer, birth defects and chronic depression" and "there is evidence that suggests that across the range of field strengths commonly encountered by people, stronger fields may not pose greater risk than weaker fields."

Response: *The conclusion of the DEIS/R is not inconsistent with the authors of the Carnegie Mellon brochure and other scientists and scientific organizations. Scientists that have reviewed the research studies for governmental or regulatory organizations have not identified field levels as hazardous or set exposure limits at or near the levels of magnetic fields associated with this project. (See Section 5.3, Volume I, DEIS/R, on Regulatory*

Setting).

The commenter quotes selected phrases from Carnegie Mellon on several items; hormonal changes, possible risks, and the hypothesis that stronger fields may not pose greater risk than weaker fields. No citation is provided, so it is assumed that the source is the 1993 brochure "What Can We Conclude From Measurements of Power Frequency Fields?"

The Carnegie Mellon brochure summarizes the specific findings reported from laboratory and epidemiologic studies, and, in addition to the quotes provided by the commenter, states the following; that some of the experiments were conducted under conditions that are quite different from those that occur when people are exposed to fields (page 15), that it is not clear if these biological changes can result in risks to public health (pages 15 and 44), and, in reference to depression, "...there is so little evidence about these effects that, at this point, such arguments are really just speculation" (page 27).

CT 3-38.8

Comment: In Volume II of the DEIS, several maps of property near the rail line call "wetlands" by another name: "Forest, vacant, underdeveloped." This is grossly misleading.

Response: See response to Comment CT 3-14.3

CT 3-38.9

Comment: The EMF field measurements given in the DEIS are in conflict with those in a study by that agency charged with responsibility for measuring EMF: the US Department of Energy (DOE).

Response: As described in Volume III of the DEIS/R, Section 5.4.1, electromagnetic fields are dynamic and directly related to the magnitude of nearby electric currents. EMFs from various sources can also have the tendency to cancel each other (Section 5.6). Due to the complexity (eg., number of potential sources) under which EMFs are created

and due to the rapid decrease of EMF strength over short distances (field strength is a function of $1/(\text{distance})^2$ for power lines and up to $1/(\text{distance})^3$ for electrical equipment, transformers, etc.), field strengths will vary significantly from location to location in the same general vicinity.

While the comment provides no specific reference to the source of the commentor's information on the DOE measurements, making it impossible to directly compare study results, the values presented in the DEIS/R are in general agreement with other measurements taken by FRA as part of its high-speed rail safety program.

The DEIS/R does conclude, based on field measurements, that exposure levels for passengers waiting at stations could potentially range from 16 to 209 mG based on measurements taken during DEIS/R investigations. This does correlate well with average alternating current measurements reported by FRA of approximately 130 mG to 165 mG. Considering that Relevant Interim Guidelines (Section 5.3) for exposure range from 1,000 to 50,000 mG and the physical complexities of EMF measurements, the levels reported in DEIS/R are considered to be both representative of the expected range of EMF levels needed to evaluate any environmental and regulatory concerns associated with the NEC project and consistent with those levels presented in similar studies.

R-1 U.S. Department of Transportation Federal Railroad Administration, "Safety of High Speed Guided Ground Transportation Systems - Potential Health Effects of Low Frequency Electromagnetic Fields Due to Maglev and Other Electric Rail Systems", Office of Research and Development, Washington, D.C., 1993.

CT 3-38.10

Comment: The DEIS' conclusion that there is no health hazard from EMF is in conflict

with recent scientific evidence.

Response: *The discussion of the impacts of EMFs has been updated to include a more extensive discussion of recent scientific literature and is presented in Volume I, Section 4.5 of the FEIS/R. Also see Response 3.5 in this volume.*

CT 3-38.11

Comment: Stating that a gas-turbine is unacceptable because of the need to run on electricity in Penn Station, when, in fact, a gas-turbine train or diesel-electric train can carry an electric shoe which would pick up the third rail in Penn Station making any delay or change of engines unnecessary, is incorrect.

Response: *Operation by non-electric locomotives under third rail electric traction in the New York tunnels is inferior to the operation of Amtrak's existing AEM-7 electric locomotive or the electric trains to be acquired for NEC service that would pick up electricity from overhead catenary. In allocating slots into Penn Station, movements of these non-electric trains consume two slots compared to one for the AEM-7 or the new train sets. Penn Station is the most crowded, over-taxed rail station in the country with substantial demand for available capacity by both intercity and commuter rail operators. The inferior performance of non-electric trains using third rail traction is a significant drawback.*

CT 3-38.12

Comment: Today, Amtrak gas-turbine trains operate in and out of Penn Station without difficulty.

Response: *Gas-turbine trains currently operate in/out of Penn Station, but not in either set of tunnels during peak periods due to insufficient tractive effort. This lack of tractive effort would reduce the capacity during peak periods.*

CT 3-38.13

Comment: We understand New York State is investing millions of dollars to upgrade Amtrak gas-turbine trains (NY DOT).

Response: *Volume I, Section 2.4.1 of the FEIS/R discusses the use of the Rohr Turboliners (RTL) in the Empire Corridor and FRA's funding of the retrofitting of one of these trains as part of the high-speed non-electric locomotive development program.*

CT 3-38.14

Comment: We believe the DEIS' failure to include resolution of the crossings' issues or the effect of planned action on crossings is an omission that disqualifies the DEIS as a complete work.

Response: *The analysis of trip times and safety issues in the FEIS/R were developed using the existing crossings as an assumption. Neither travel times nor safety are significantly impacted by the maintenance of these crossings. Therefore, the issue of whether or not these crossings are closed or maintained is not critical to the analysis of the impacts and benefits of electrification of the NEC.*

CT 3-38.15

Comment: This reduction in speeds [due to existing crossings] is incompatible with Amtrak's desire to compete with the airlines by offering the public "fast trains." Stated another way, leaving the crossings as is and doubling the speed of trains, thereby ignoring and overriding safety speed limits, is irresponsible.

Response: *See response to Comment CT 3-38.14.*

CT 3-38.16

Comment: It is unethical and misleading to omit the disposition of crossings from the DEIS in the empty claim that crossings and high speed trains are distinct, unrelated issues.

Response: *See response to Comment CT 1-2.6, CT 3-14.14 and Response 3.8 in this volume.*

CT 3-38.17

Comment: We believe the DEIS is incomplete in its failure to include sulfur dioxide (SO₂), ozone (O₃) and carbon dioxide (CO₂) as pollutants.

Response: *With respect to an analysis for SO₂, see the response to Comment CT 2-7.15.*

With respect to an analysis for ozone, see the response to Comment CT 1-17.1.

With respect to an analysis for CO₂, there are no health criteria or emissions limits listed in the Clean Air Act against which to compare CO₂ emissions. In fact, except for the possible effects of CO₂ as a "greenhouse gas", the Clean Air Act does not define CO₂ as a pollutant (hazardous to human health) of any kind. CO₂ is generated from numerous natural sources, as well as anthropogenic sources, and has not been defined as a toxic pollutant.

The electrification of the NEC will result in a reduction of emissions of CO₂ due to elimination of diesel powered locomotives from service on the Corridor, reduction of aircraft operations, and passenger vehicle VMTs. Although no quantification of CO₂ emissions is required, it is likely that the anticipated reduction in CO₂ emissions due to electrification will more than offset a concurrent increase in CO₂ emissions from power plants generating electricity for the project.

CT 3-38.18

Comment: We believe the DEIS is incomplete in its failure to show a comparison of air quality resulting from different modes of locomotion (gas turbine, mag-lev, diesel, and electric) excluding the effect of legislation and automobile emission testing which are unrelated to the Amtrak project.

Response: *The FEIS/R compares air quality from all reasonable alternatives, including gas-turbine, diesel, and electric. Maglev technology was eliminated from consideration in the screening step, therefore, further analysis was not performed.*

CT 3-38.19

Comment: We believe the DEIS is incomplete in its failure to support its basic assumption that 38% of airline passengers will desert

airplanes and switch to Amtrak's electric trains. The DEIS should include the market research which supports this conclusion.

Response: *See response to Comment CT 3-14.25.*

CT 3-38.20

Comment: It should also include (a) what the new fares will be, (b) the projected cost of the project, and (c) the effect on Amtrak's profit.

Response: *See response to Comment CT 3-14.23.*

CT 3-38.21

Comment: We believe the DEIS is incomplete in its failure to include all accidents at crossings, not just at certain crossings.

Response: *All accidents reported by Amtrak through 1985 were listed in the DEIS/R. The accident listing in Volume I, Sections 3.8 and 4.8 of the FEIS/R include all reported accidents from 1985 through 1992 (see Section 4.8 of the DEIS). There were no accidents at private crossings during this time.*

CT 3-38.22

Comment: We believe the DEIS is incomplete in its failure to mention that Amtrak is currently investing (public) funds to upgrade gas-turbine trains in New York State.

Response: *See response to Comment CT 3-38.13.*

CT 3-38.23

Comment: We believe the DEIS is incomplete in its failure to mention that an Amtrak gas-turbine train set a speed record (170 MPH) in 1967.

Response: *Volume I, Section 2.4.1 discusses the United Aircraft TurboTrain. This train was developed under a demonstration contract between FRA and United Aircraft. The high-speed test of this train in a test configuration occurred five years before the creation of Amtrak.*

CT 3-38.24

Comment: We believe the DEIS is incomplete in its failure to mention a proposed MAG-LEV

train (non-Amtrak) which is on the drawing board and which will operate between Boston and New York in two hours (anecdotal).

Response: *Maglev and other alternative technologies are discussed in Volume I, Sections 2.2 and 2.3 of the FEIS/R. However, it should be noted that two-hour Maglev service between New York and Boston would require a right-of-way with only minor curvature. As no such transportation corridor currently exists, it would necessitate extensive land-takings, river crossings, and unavoidable impacts to sensitive environments.*

CT 3-38.25

Comment: We believe the DEIS is incomplete in its failure to mention that Amtrak studies show at least two alternative routes with "no fatal flaws" (anecdotal).

Response: *Route alternatives and attendant environmental impacts are discussed in Volume I, Section 2.2.4 of the FEIS/R. A summary of this section is included at the beginning of this volume. These sections adequately demonstrate that there is no environmentally less-damaging alternative route.*

CT 3-38.26

Comment: We believe the DEIS is incomplete in its failure to mention the new Chrysler experimental gas-turbine automobile.

Response: *The DEIS/R does not discuss experimental automobile gas-turbine technology, as it is not applicable to the power requirements of rail locomotion.*

CT 3-38.27

Comment: We believe the DEIS is incomplete in its failure to mention the New Cummin's diesels which reduce pollution by 50%.

Response: *Potential opportunities for air pollutant emission improvements in the development of a next generation non-electric high-speed locomotive is recognized. FRA proposes to explore these opportunities as part of its high-speed non-electric locomotive program and this is recognized the No-Build*

Alternative FRA-150 scenario in section 4-10 of the FEIS/R.

CT 3-38.28

Comment: We believe the DEIS is incomplete in its failure to mention the US/EPA 1990 staff report recommending that EMF be classified as a carcinogen.

Response: *The 1990 EPA report is a draft report of the scientific studies related to EMF and cancer. This draft report was not specifically mentioned in the DEIS/R for three main reasons. First, it never advanced past the draft stage. Second, the 1990 EPA report is outdated as a review document because it covers only the research prior to 1990, after which time considerable scientific research studies have been published. Third, since 1990, several groups of scientists in the United States, in other countries such as Great Britain, France, Denmark, and the Netherlands, and several international scientific organizations have reviewed the research on the topic of EMF and cancer. These reviews have identified problems with the report and have recommended that it be revised. These published reviews and their recommendations for exposure guidelines are discussed in Section 5.3 of the DEIS/R and in the additional study Analysis of EMF Impacts on Children, presented in Volume II, Section 5.4 of the FEIS/R. Third, the report has not yet been revised and published as a final EPA report.*

CT 3-38.29

Comment: We believe the DEIS is incomplete in its failure to mention the accident record of Amtrak over the past 10 years.

Response: *The Proposed Action being assessed in this FEIS/R is extension of electric traction from New Haven to Boston. The issue of Amtrak's accidents would only be relevant if, for some reason, operations under electric traction were believed to create a different potential for accidents than non-electrified operations. In fact, a review of accidents on the portion of the NEC currently electrified shows the accident rate is less than*

occurs system wide.

CT 3-38.30

Comment: We believe the DEIS is incomplete in its failure to mention that Congress has asked the US General Accounting Office to investigate Amtrak's practices, including high-speed rail project.

Response: *The General Accounting Office, under the direction of the Controller General, is charged with, among other functions, auditing and settling the Government's accounts (31 USC 701-720). GAO is directed to audit the financial transactions of each executive, legislative, and judicial agency of the government in accordance with principles and procedures of accounting prescribed by the Controller General.*

In line with the Controller General's role as government auditor, the Controller General is directed to investigate and issue reports on all matters relating to the receipt, disbursement, and application of public funds. Such investigations and reports may also be requested by either House of Congress or by any committee of either House having jurisdiction over revenue or appropriations of expenditures. GAO audits may extend beyond government agencies to contractors.

GAO has not indicated any concerns over Amtrak's plans for NECIP or its role in implementing this program. In Congressional testimony earlier this year on the preliminary results of the GAO review of Amtrak, the GAO's director of transportation issues stated:

"The current financial condition leads me to the key challenges facing Amtrak in the next several years. They will have to be met; those are the plain facts. They will have to be met if the expectation is for Amtrak to operate a viable intercity network.

"First, they are going to have to modernize the fleet, acquire the high-speed trains for the Northeast Corridor and continue improvements in the Northeast Corridor. (emphasis added)" (See testimony of Kenneth M. Mead

published in Department of Transportation and Related Agencies Appropriations for 1995 -- Hearings Before A Subcommittee of The Committee on Appropriations, House of Representatives, page 588.)

CT 3-38.31

Comment: We believe the DEIS is incomplete in its failure to compare the cost of running an electric train to a gas turbine and (newer) diesel train in 2010, to include fuel cost assumptions for each mode of locomotion.

Response: *As discussed in Response 3.2, the FEIS/R expands its discussion of alternative technologies and compares these alternatives on the basis of energy consumed. Projecting changing energy costs over the next 15 years would add little to this comparison.*

CT 3-38.32

Comment: The DEIS omits very relevant studies on alternate routes and alternate locomotion systems.

Response: *See response to Comment CT 1-1.6.*

CT 3-38.33

Comment: The performance of Amtrak, to date, raises questions about the ability of Amtrak to capture 38% of the current air line passenger market between New York City and Boston.

Response: *See response to Comment CT 3-38.19.*

CT 3-38.34

Comment: The DEIS and EIS should provide the public with Amtrak's on-time record which we believe to be much poorer than the airlines.

Response: *In 1993 and 1994 to date, Amtrak's Boston division on-time performance has averaged better than 93%.*

CT 3-38.35

Comment: Pennsylvania Station is avoided by many travelers due to the high crime rate and the unsightliness of the environment there, including the many homeless people sleeping on the floor.

Response: *FRA, Amtrak and the City and State of New York are jointly redeveloping the James A. Farley Post Office Building in New York City as a world class train station on the order of Washington's Union Station.*

CT 3-38.36

Comment: We believe the DEIS is deficient in that it states that many of the adverse impacts resulting from the Amtrak plan can be mitigated. However, not only does the DEIS fail to tell its readers what the cost of the mitigation is but DEIS fails to mention that there are no funds authorized to cover the cost of all the mitigation.

Response: *Impacts associated with the proposed electrification project will be mitigated with funds appropriated for this project. To date, Congress has appropriated approximately 75% of the funds required to implement this project. It is not unusual for major infrastructure projects to be initiated prior to all necessary funding being appropriated.*

CT 3-38.37

Comment: As noted above, the DEIS is deficient in not only providing comparisons with alternatives. Most tables only compare existing, no-build (2010), and electrification (2010); they should also compare gas turbine (2010), Mag-Lev (2010), diesel (2010), and alternative route (2010).

Response: *A gas-turbine alternative is included in the FEIS/R as the No-Build Alternative - FF-125 Scenario. The other comparisons are not made because they were eliminated from consideration in the screening process.*

CT 3-38.38

Comment: Has the DEIS staff calculated: Minimum trip time with 4 express stops using current equipment? Minimum trip time with 4 express stops with electrification? Minimum trip time with 4 express stops with gas-turbine and/or diesel trains using an electric shoe which allows transit in and out of Pennsylvania Station?

Response: *Volume I, Section 2.3 of the FEIS/R discusses the gas-turbine alternative and its performance. The diesel alternative was eliminated from consideration in the screening process, therefore, it was not analyzed in depth.*

CT 3-38.39

Comment: The DEIS should have covered what we understand to be an Amtrak plan to build a third rail to handle freight trains.

Response: *The State of Rhode Island proposes to develop the site of the former Quonset Point naval base into a commercial port. The State of Rhode Island is reviewing the alternatives of providing rail freight access between Central Falls, RI., and Davisville, RI., to meet this port development's needs. In June, 1994, RIDOT and FHWA, with cooperation of FRA, initiated an EIS as part of the review of these alternatives. The mitigation incorporated into the electrification FEIS/R (Volume I, Section 5.1.1(i)) will require Amtrak to develop the electrification project to accommodate whatever approach the State decides to undertake to accommodate the needs of this port. Also see Response 3.3 in this volume.*

CT 3-38.40

Comment: The DEIS should have noted that (at least) two sections of track, west of New Haven and north of Providence, are owned by parties other than Amtrak. These parties have priority over their section track.

Response: *This information is contained in the FEIS/R Volume I, Section 1.4. Amtrak owns the NEC from Washington to New Rochelle, NY., Metro North Commuter Railroad owns the NEC from New Rochelle to Port Chester, NY., Connecticut DOT owns the NEC from Port Chester to New Haven, Amtrak owns from New Haven to the Rhode Island -- Massachusetts state line and the Massachusetts Bay Transportation Authority owns the NEC in Massachusetts.*

Amtrak is responsible for dispatching the NEC main line except for 56 miles between Shell interlocking and New Haven which is dispatched by Metro North. Coordination of operations among the many users of the NEC is one of the challenges identified in the NECTP, but it should not affect the ability to provide reliable high-speed service.

CT 3-38.41

Comment: We believe the nature of the shoreline route makes it a poor choice for high speed rail.

Response: *Comment noted.*

CT 3-38.42

Comment: The DEIS fails to provide qualitative and quantitative comparisons with other routes.

Response: *See Response 3.1 in this volume.*

CT 3-38.43

Comment: Stress and torque demands of higher speed trains place a burden on curves and bridges, which burden poses a substantial safety problem -- one that endangers lives.

Response: *See responses to Comments CT 1-2.9 and MA 2-16.8.*

CT 3-38.44

Comment: The DEIS should comment on safety problems on bridges and on curves as well as problems created by adding a large number of high speed trains.

Response: *See responses to Comments CT 1-2.9 and MA 2-16.8.*

CT 3-38.45

Comment: The DEIS assumes that 38% of airplane passengers will switch from planes to Amtrak trains. The smaller planes will pollute less and, therefore, air quality will improve. The people switching to trains will triple Amtrak's ridership (thereby giving Amtrak an economic boost). We believe the DEIS needs to be more forthright by listing, in one section, all of the assumptions necessary for

Amtrak to achieve its stated goals and the market research which has been done to support its basic assumption on airline passengers switching to rail.

Response: *See response to Comment CT 3-14.25.*

CT 3-38.46

Comment: We conclude that raising the speed limits to accommodate Amtrak's goals presents an environment that becomes intolerably dangerous.

Response: *Comment noted.*

CT 3-38.47

Comment: We believe the DEIS is deficient in not listing all endangered or threatened species (per CT/DEP and US/EPA) in areas near the rail line.

Response: *As noted in Volume III, Technical Study 11 of the DEIS/R; the presence of Federally listed or proposed endangered or threatened species was noted through consultation with the U.S. Fish and Wildlife Service, New England Field Offices.*

The presence of state listed Endangered, Threatened or Special Concern Species were noted through the appropriate state agency; in this case, Connecticut Natural Diversity Data Base. All species listed have been identified and consultation undertaken with appropriate authorities. Based on this consultation, it was concluded that the proposed project with the mitigation measures continued in Chapter 5, will not impact these species. Similarly, Rhode Island and Massachusetts Natural Heritage programs were also consulted.

CT 3-38.48

Comment: The DEIS should give one or more examples of where electrification or increasing rail speeds has led to increased ridership.

Response: *There are numerous examples where the advent of electric high-speed rail service has led to significant increases in ridership, such as the Shinkansen in Japan, the TGV in France and the ICE in*

Germany. Perhaps the most relevant example however, can be found in the U.S. In 1983, as the NECIP improvements between Washington and New York City were nearing completion, Amtrak's share of the combined air and rail market between these two points was 20%. Its current share of this market is 45%.

CT 3-38.49

Comment: We believe the DEIS is in error when it states that EMF radiates (only) to 150 feet.

Response: *The DEIS/R does not intend to infer that magnetic fields propagate no more than 150 feet. The fact is that low strength magnetic fields will propagate beyond 150 feet. However, the strength of the field from an electrified line of the design proposed for this project is inversely proportional to the square of the distance away from the line. This results in a field strength which decreases rapidly with distance, but theoretically never reaches zero. However, after about 150 feet the strength associated with electrical lines becomes very low (less than 4 mG) and indistinguishable from other EMF "background" sources (other power lines, homes, vehicles, etc.). This is especially true in the more urban areas. While measurements beyond 150 feet could be collected, the significance of the data would be questionable since it would become increasingly harder to correlate the field strength with a specific electrical source.*

CT 3-38.50

Comment: We believe the DEIS is in error in assuming that there are safety standards for EMF or electromagnetic radiation (EMR).

Response: *The DEIS/R made no such claim. It specifically states "As described above, epidemiological and biological studies undertaken to determine if any link exists between EMF exposure and health impacts have not been conclusive. As a result, regulations regarding EMF exposure have not been promulgated by the Federal government or any states,*

although some states have established guidelines instead, as described below. (emphasis added). (DEIS/R, Volume I, page 4-20)

CT 3-38.51

Comment: The DEIS and EIS should state what effect on bridge openings (for passage of marine vessels) the Amtrak plan will have.

Response: *See response to Comment CT 3-14.37.*

CT 3-38.52

Comment: One Town of Groton property owner has already received a \$10,000 abatement on the value of her home which is near the railroad and near the planned Esker Point paralleling station.

Response: *See response to Comment CT 3-14.7.*

CT 3-38.53

Comment: The DEIS should estimate EMF levels at any nurseries, hospitals, schools, old-age homes, and retirement homes within 250 feet of the rails.

Response: *As described in the response to Comment CT 3-38.49, exposure was not estimated beyond 150 feet from the rails because the EMF impact from the proposed project is indistinguishable from background levels at distances beyond 150 feet.*

CT 3-38.54

Comment: The DEIS should state that there is no correlation between electrification and cleaner air.

Response: *This project will contribute to improved air quality. The data which support this conclusion are presented in Volume I, Section 4.10 of the FEIS/R.*

CT 3-38.55

Comment: We believe that currently available equipment has the necessary speed to accomplish Amtrak's goal of a 3-hour trip between New York City and Boston.

Response: *Volume I, Sections 2.2 and 2.3 of the FEIS/R discuss all of the existing and planned equipment owned by Amtrak and*

the performance abilities of that equipment. According to the existing data, Amtrak has no current equipment that could reliably provide revenue service between New York and Boston (as described in the FEIS/R) in less than 3 hours without substantially greater infrastructure improvements than those planned.

CT Marine Trades Assoc.

CT 3-39.1

Comment: CMTA has been surveying affected marine businesses to establish a dollar figure that could result if access to the inland marinas were denied due to the AMTRAK bridges being closed. The increased time of closure has been clearly laid out in the electrification proposal which states that more, and faster, trains will be using the trackage during prime boating hours resulting in the rail draw bridges not being able to open. Using Niantic Connecticut as an example, it is very clear that the impact of non-access to the facilities inland of the bridge with its 11' clearance would be devastating to its economy. If access was limited, the loss of ONE summer's dockage alone could reach 1.3 million dollars. This figure does not include other revenues that would be affected, i.e., fuel docks, repairs, winter storage, food, etc. Niantic's economy is totally dependent on summer boating traffic and its property tax assessments on homes and businesses are based on use and access to Long Island Sound.

Response: *Volume I, Sections 4.2 and 4.9 of the FEIS/R discuss the impact of the proposed action on marine traffic. It includes an analysis of bridge opening windows for all of the affected movable bridges. Mitigation for these potential impacts are also discussed in Section 5.1. A summary of this issue is presented at the beginning of this volume.*

Jeffrey S. Berke

CT 4-1.1

Comment: The writer supports the project.

Response: *Comment noted.*

J. Raymond Fleming

CT 4-2.1

Comment: The writers are opposed to the project due to environmental and economic concerns.

Response: *Comment noted.*

Claudia Goodridge

CT 4-3.1

Comment: We paid top dollar for this condominium in 1987, and do not feel that we should be made to bear the burden of a plan to increase rail volume, noise, and vibration.

Response: *Comment noted.*

CT 4-3.2

Comment: Who is supposed to leave their car in favor of the train?

Response: *See response to Comment CT 3-14.25.*

David Greenfield

CT 4-4.1

Comment: This, in concert with the noise, vibration, and health concerns will cause me great distress and financial loss. Since I will be unable to sell [my home] and have wherewithal to purchase another home.

Response: *Comment noted.*

Paul W. Goettlich, II

CT 4-5.1

Comment: What is the meaning of a "catenary system"

Response: *The term catenary system is used to describe the type of pole and wire system proposed to supply electricity to the trains along the NEC. Catenary is an engineering term which describes the curve of a flexible, but unstretchable cord (in this case wire) of uniform density that is freely hung between two points (in this case poles).*

CT 4-5.2

Comment: Please explain what you know of the electromagnetic problem.

Response: *Volume I, Sections 3.5 and 4.5 of the FEIS/R present an updated discussion of the EMF issue. Also see Response 3.5 in this volume.*

CT 4-5.3

Comment: Is a 1.5 hr to 3 hr delay of freight trains an accurate figure? Wouldn't better scheduling help?

Response: *See Response 3.3 in this volume.*

Patricia S. Bullis

CT 4-6.1

Comment: The writer is opposed to the project due to environmental and economic concerns.

Response: *Comment noted.*

Thomas Ceddin, M.D.

CT 4-7.1

Comment: One reason why electrification should not take place is the unknown dangers of electromagnetic waves.

Response: *Comment noted.*

CT 4-7.2

Comment: One reason why electrification should not take place is that the route is inherently slow and curvy.

Response: *See response to Comment CT 3-14.37.*

CT 4-7.3

Comment: One reason why electrification should not take place is the devaluation of beautiful coastline real estate.

Response: *This study found no data to support the conclusion that the installation of a catenary system will have a direct impact on the value of property abutting the right-of-way. The issue of the proposed project's impact on real estate values is discussed in Volume I, Section 4.2 of the FEIS/R.*

CT 4-7.4

Comment: Electrification of the proposed coastal route is antagonistic to the development

of tourism in S.E. Connecticut.

Response: *The issue of the proposed project's impact on tourism is discussed in Volume I, Section 4.2 of the FEIS/R. It was concluded that the proposed project should not have a significant adverse affect on the tourist attractions along the S.E. Connecticut coast, but would, together with other NECIP improvements, make this area more accessible to tourists.*

Deborah R. Fisher

CT 4-8.1

Comment: I think it is doubtful that a genuinely private enterprise would risk such an enormous amount of money on such fragile speculation as Amtrak is providing as to the potential return on the investment.

Response: *Comment noted.*

CT 4-8.2

Comment: This project offers our state nothing in terms of a transportation benefit, poses a significant economic threat to rail freight-dependent businesses, and would abuse natural and manmade environments of significant history.

Response: *See response to Comment CT 1-1.7.*

CT 4-8.3

Comment: In specific terms, we have an exceptional view of Long Island Sound which will be substantially impacted by the catenary system.

Response: *As noted in Volume I, Table 3-11.1 (Appendix B) of the DEIS/R, this residence has a potentially adverse visual impact. As described in Volume I, Section 5.1 of the FEIS/R, pole placement and other design modification are proposed to mitigate this potential impact.*

CT 4-8.4

Comment: The noise which will be produced by 52 Amtrak trains, freight traffic, and commuter service will be unbearable.

Response: *Volume I, Sections 4.4 and 5.1.1(d) of*

the FEIS/R discusses the potential noise impacts and appropriate mitigation. Also see Response 3.6.

CT 4-8.5

Comment: Finally, I am in agreement with the DEIS' finding that, regardless of scientific findings about the effects of electromagnetic fields, the public perception of those effects is the real issue, and that perception is that they are harmful.

Response: *Comment noted.*

Mr. & Mrs. A. E. Noel

CT 4-9.1

Comment: The line should have been moved inland away from the shore so we could open up the coves, etc.

Response: *See response to Comment 1-14.8 and Response 3.1 in this volume.*

Laura M. Robbins

CT 4-10.1

Comment: The writer is opposed to the project because of health, environmental, and cost concerns, as well as its impact on lifestyle.

Response: *Comment noted.*

William Filbey

CT 4-11.1

Comment: Maintaining the wye [which connects the Valley Railroad to the Corridor] will have no environmental impacts on the coast, but to eliminate it would do irreparable harm to this area.

Response: *The current wye track at Old Saybrook which permits the Providence and Worcester Railroad to interchange railroad cars with the Valley Railroad is to be preserved under the Amtrak NEC electrification project.*

CT 4-11.2

Comment: Economically viable freight service must be maintained by the P&W to its customers.

Response: *See Response 3.3 in this volume.*

Susan H. Munger

CT 4-12.1

Comment: Existing trains provide a service that the airlines cannot do by servicing cities and towns between Boston and New York. Can they compete with the airlines?

Response: *Electrification of the NEC will not preclude local (non-Metroliner) and commuter service between Boston and New Haven. Local service will still be provided and will be enhanced. As shown in a schedule prepared by Amtrak (Table 4.9-3 in Volume I), the five hour local service between Boston South Station and New York will be reduced to 3 hours and 30 minutes using the higher speed electric trains. Also, downtown to downtown Amtrak can compete with the airlines for time-sensitive passengers, once the high speed service is operating. This is demonstrated daily between Washington and New York City where Amtrak carries 45% of the combined air-rail passengers.*

CT 4-12.2

Comment: If funds are channeled into a high-speed, limited stop service (serving only one Connecticut town), how much money will be left to maintain service to other cities served?

Response: *The proposed improvements to the NEC mainline will also benefit conventional service which stops at Old Saybrook, New London and Mystic in Connecticut and Westerly and Kingston in Rhode Island. As noted in Volume I, Table 4.9-3, New York City to Boston trip times on conventional trains will drop from five hours to 3:30 -- a similar reduction to that experienced by the express trains.*

CT 4-12.3

Comment: Is it realistic to expect [electric trains] will go from New Haven to Boston in 1.5 hours, along a curving shoreline, through the middle of numerous towns and villages (New London, Niantic, Pawcatuck, etc.) stopping twice (for 5-10 minutes each time)?

Response: *Amtrak has completed a computer simulation process known as a "Train*

Performance Calculator" or TPC which shows that a passenger train can be operated between South Station in Boston and Union Station in New Haven with 3 intermediate station stops in about one hour and 54 minutes (see Volume I, Table 4.9-3). Input factors include locomotive power characteristics, length and weight of the passenger train, the number of intermediate station stops, the profile and curvature of the right of way and track alignment and live speed restrictions such as those required at moveable bridges. The TPC computer model has been widely used and accepted for over ten years by the railroad industry as a reliable means of predicting train travel times.

CT 4-12.4

Comment: The tremendous increase in passenger trains, over 30 more a day, would interfere with freight use of the tracks.

Response: *See Response 3.3 in this volume.*

CT 4-12.5

Comment: While there is no doubt that some people prefer the more leisurely train ride, those who want speed will still choose the airplane.

Response: *See response to Comment CT 3-14.25.*

CT 4-12.6

Comment: Will it be able to make back the money spent on electrification or will it become even less profitable than it is today?

Response: *See response to Comment CT 3-14.23.*

CT 4-12.7

Comment: And will this then lead to deterioration of the service that is needed to points between New York and Boston?

Response: *See response to Comment CT 4-12.2.*

CT 4-12.8

Comment: It may be quicker to get to an airport than to Penn Station which requires going through Manhattan traffic.

Response: *While access time is an important influence on travelers' mode choices, the*

relevant comparison for travelers within the New York metropolitan area is between access time to various airports and access time to the various rail stations, which include suburban locations as well as Penn Station. For the significant proportion of trips to and from the New York metropolitan area that do originate in or are destined for Manhattan, however, the location of Penn Station provides a considerable access time advantage.

CT 4-12.9

Comment: The construction work, the presence of the towers every 200 feet or less, the tremendous increase in the number of trains per day, will all be damaging to Connecticut's shoreline, a valuable natural resource.

Response: *The construction of the electrification facilities, installation of catenary poles and increase in rail traffic have been determined to cause minimal impacts to the coastal resources along the shoreline.*

The permitting process for the project requires consistency concurrence with the standards and policies of the Connecticut Coastal Management Act (CCMA), C.G.S. Sections 22a-90 through 22a-122, inclusive.

The CCMA contains policies and standards for the protection of natural resources and the management of uses within the coastal area, and addresses adverse impacts which must be avoided or mitigated. The construction effort, poles and threat to coastal resources will be reviewed in this process.

CT 4-12.10

Comment: Are we going to cut down all the trees along the shoreline route so business people can go from NY to Boston in three hours?

Response: *At this time the only tree cutting associated with the electrification project would be site clearing for electrical facilities such as paralleling stations and switching stations. Similarly there may be tree removal or cutting associated*

with raising bridges. No other tree cuttings are anticipated, except those associated with normal maintenance.

CT 4-12.11

Comment: What about other kinds of engines that do not require overhead electrical wires, such as modernized more efficient, less polluting diesels?

Response: *See Response 3.2 in this volume.*

CT 4-12.12

Comment: Important questions have been raised regarding the risks of exposure to electromagnetic fields.

Response: *See Response 3.5 in this volume.*

Neild B. Oldham

CT 4-13.1

Comment: I have many concerns, including:

- noise and visual pollution;
- increased dangers at crossing;
- health hazards from electromagnetic fields;
- reduced service to southeastern Connecticut;
- environmental damage further degrading wetlands, tidal marshes, and coves;
- the complete cutting off of much of the area's coastline from all citizens.

Response: *These issues are discussed in Volume I, Chapter 4 of the FEIS/R. Also see Responses 3.5, 3.6 and 3.8.*

CT 4-13.2

Comment: New rights-of-way were found for the super highways wherever existing ways were inadequate or unsuitable. Why should we do less for the railways?

Response: *The interstate highway system was designed and built in the 1950s and 1960s, prior to the passage of NEPA and similar state statutes. It is generally*

agreed that the massive private land takings, destruction of wetlands and other sensitive environments, and impacts to historic resources that were required for the construction of these highways would not be possible today.

Janet Lage/Robert Nixon

CT 4-14.1

Comment: Why are impacted residents being informed so late in the process?

Response: *The public has been involved in EIS/R process since scoping began in 1991. Volume I, Section ES.1 and Appencix C of the FEIS/R discuss the extensive public outreach program conducted for the DEIS/R.*

CT 4-14.2

Comment: Although there is less noise generated with electric driven trains, there will be a considerable increase in noise for bordering residents as the result of increased train frequency.

Response: *This is a general finding of this study. See Response 3.6 in this volume.*

CT 4-14.3

Comment: The DEIS/R Report notes that higher train speeds will promote greater vibration.

Response: *This is a general finding of this study. See Response 3.6 in this volume.*

CT 4-14.4

Comment: We are aware that the study of health risks associated with electromagnetic fields is incomplete. At the public hearing we attended, it was pointed out that the study of EMF related health risks is inconclusive to date.

Response: *See Response 3.5 in this volume.*

CT 4-14.5

Comment: The decision to electrify the New Haven to Boston segment of the NEC will double the electrical usage between New Haven and New York.

Response: *As discussed in Volume I, Section 4.6 of the FEIS/R, the proposed action will*

actually result in a decrease in energy used for intercity travel along the NEC.

CT 4-14.6

Comment: The focal point from our house year round and our main outdoor living space seasonally faces the direction of the tracks. The presence of the catenary system structures will negatively impact our view and further serve to reduce the value of our property. This will affect many residents, not just us.

Response: *This area has been evaluated in Volume I, Sections 4.2 and 4.11 of the FEIS/R.*

CT 4-14.7

Comment: There is no advantage for Connecticut Residents (Tax Payers). With all of the negative impacts delineated above in mind, one must than ask: What possible advantage will there be for Connecticut residents? The answer is little to no advantage. With all of the increased traffic, only a few if any of the trains traveling from New York to Boston will actually stop in Connecticut

Response: *See response to Comments CT 1-1.7 and CT 1-3.5.*

CT 4-14.8

Comment: Can the proposed train speeds be safely achieved with the existing track system?

Response: *The electrification of the NEC is one part of a program of investment in the infrastructure (tracks, roadbeds, bridges, signals, etc.) of the NEC. This overall project is known as the Northeast Corridor Improvement Project (NECIP). These infrastructure improvements will allow the increased speeds of electric trains to be safely used.*

CT 4-14.9

Comment: Will passenger travel justify the expenditure?

Response: *Yes.*

CT 4-14.10

Comment: Can we afford to spend the proposed \$233 million federal dollars when we continue to have such a huge federal

budget deficit?

Response: *Allocation of Federal financial resources is made by Congress. Since 1991, Congress has annually appropriated funds for this project which is an indication that it believes that such expenditures are worthwhile.*

CT 4-14.11

Comment: The proposed electrification project with its marked increase in passenger train travel will mandate that freight train travel occur at nighttime.

Response: *See Response 3.3 in this volume.*

Amy L. Hainline

CT 4-15.1

Comment: My house was built in 1795 yet it is not included in the list of historic properties affected. Sitting at a distance of 31 feet from the tracks, it should be.

Response: *Volume I, Section 4.3 of the FEIS/R addresses the impact of the project on this property.*

CT 4-15.2

Comment: Until the 1940's my house had a legal (actually a physical crossing) built to afford access to the Mystic River. It continues to be used as a crossing presently.

Response: *For safety reasons, Amtrak prohibits unauthorized access to the railroad right-of-way. As the right-of-way is private property, unauthorized access constitutes trespassing, and it is Amtrak's stated policy to aggressively enforce the trespassing statutes.*

CT 4-15.3

Comment: The omission here seems to be what will be done about the significant noise/vibration impact?

Response: *Volume I, Sections 5.1.1(d) of the FEIS/R discuss the proposed mitigation for noise and vibration impacts resulting from increased train service.*

Robert I. Welsh, Jr.

CT 4-16.1

Comment: I am opposed to the project because of potential health hazard posed by the overhead 25,000 volt alternating current electric wires and the 115,000 volt feeder wires that are brought in to power the line.

Response: *Comment noted.*

CT 4-16.2

Comment: I am opposed to the project because of potential increased hazards of operating "high speed" trains on a roadbed that was not designed as a high-speed right-of-way.

Response: *Comment noted. Also see response to Comment CT 4-14.8*

CT 4-16.3

Comment: I am opposed to the project because of the impact of 56 trains per day on waterborne commerce, recreational boating and commercial fishing in an area that depends very heavily on these activities for revenues.

Response: *Comment noted.*

CT 4-16.4

Comment: I am opposed to the project because of the degradation of the shoreline values and the blatant trampling on the quality of life by the addition of 12,000 electric poles, 25 substations and whatever else will be added once this project is started.

Response: *Comment noted.*

CT 4-16.5

Comment: I am opposed to the project because of the totally unrealistic perception that trains of some exotic design will be able to efficiently operate at high speed over this route with five major (opening) and numerous smaller bridges, numerous curves and no less than fifteen shoreline communities.

Response: *See response to Comment CT 4-14.8*

CT 4-16.6

Comment: I am opposed to the project because of the apparent total disregard for considering American designed and

manufactured rail equipment.

Response: *Comment noted. It should be pointed out, however, the "Buy American" provisions applicable to Amtrak require that at least 50% of this equipment be of domestic origin. Amtrak President Thomas Downs has stated that Amtrak will substantially exceed this goal. This, together with North American safety and performance standards, would seem to indicate that equipment acquired for Northeast Corridor service will be largely designed and built in the U.S.*

CT 4-16.7

Comment: I am opposed to the project because of the total impact of noise and vibration pollution, property value degradation, unknown environmental degradation and general reduction of esthetics values and quality of life for the shoreline communities.

Response: *Comment noted.*

CT 4-16.8

Comment: I am opposed to the project because of the apparent disregard for the fact that this project will be of little or no benefit to the people and the communities of the shoreline between New Haven and Providence but who will bear the maximum burden for this encroachment on their daily lives.

Response: *Comment noted. See response to Comment CT 4-12.2.*

CT 4-16.9

Comment: I am opposed to the project because of the increase in "peak period" electric power consumption at a time when every other effort is to reduce energy consumption and burning fossil fuels.

Response: *The alternatives to electrification, including the no-build alternative, result in the burning of fossil fuels (i.e. diesel). As discussed in Volume I, Sections 2.2 and 2.3 of the FEIS/R, the generation of electrical power may come from many sources, including alternatives to fossil fuels.*

Nancy & Fred Richartz

CT 4-17.1

Comment: These commenters were generally opposed to the project.

Response: *Comment noted.*

Jane G. Smith

CT 4-18.1

Comment: Go through Hartford; it's shorter!

Response: *See Response 3.1 in this volume.*

William M. Cannon

CT 4-19.1

Comment: First, I must state that the outburst by your moderator, Mr. Ira Levy, at the New London, CT. public hearing was unwarranted and totally unprofessional. I presume, since he did not identify his relationship to the project, that Mr. Levy is a member of the DMJM/Harris organization. I believe that both DOT and the FRA must admonish DMJM/Harris for this unseemly display of anger. In addition, I believe that Mr. Levy owes all the taxpayers, who are paying his wages, a personal apology. An open letter to the New London DAY newspaper may be appropriate.

Response: *Comment noted*

CT 4-19.2

Comment: The reported sale by AMTRAK of air rights for public utility transmission lines along the rail line south of New Haven and the subsequent installation of 75 foot towers along the rail must be specifically disallowed in the FRA Record of Decision for this project.

Response: *See response to Comment CT 3-14.28.*

CT 4-19.3

Comment: There is evidence to suggest that the increase in daily rail traffic will cause impediments to waterway traffic along the coastline.

Response: *See Response 3.4 in this volume.*

CT 4-19.4

Comment: The viability of continuing funding for these maintenance expenses is a proper

subject to be evaluated in the DEIS.

Response: *Amtrak projects that the improved rail service in the Boston and New York City corridor will have a net contribution to Amtrak's revenues after deduction of operating expenses including maintenance.*

CT 4-19.5

Comment: The DEIS does not consider the impact of new or increased current over the 115 kV transmission lines that will be built to the feeder stations. The DEIS notes that EMF fields under high power transmission lines typically is 12 to 200 mg, significantly higher than the values presented for the rail ROW. This impact must be addressed before the FRA takes action on the DEIS.

Response: *The FEIS/R considers EMF levels produced by the 2 X 25 kV catenary, feeder stations, and underwater cables for realistic operational scenarios (see Section 4.5 in Volume I and Chapter 5 in Volume II). Section 2.4.2 (b) in Volume I describes the power distribution system required, involving step down transformer substations and 25 kV catenaries. There are two short tie-lines in Connecticut: a 1200 foot aerial line at Branford, CT (see Section 2.2.2 in Volume II) in a EMF delta configuration; and an underground segment in New London (see page 5-37 of Volume III of the DEIS/R). Section 5.5.1 (Volume III of the DEIS/R) shows tie-line levels (no higher than 13 mG) and Table 5-5 shows the potentially exposed population.*

CT 4-19.6

Comment: The DEIS does not sufficiently address the impact of the electrification on existing and future rail freight operations.

Response: *See Response 3.3 in this volume.*

CT 4-19.7

Comment: The analysis of pollutants created by the replacement of the diesel powered engines neglects the fact that the majority of electric power generation in the US is from coal.

Response: *The analysis in the FEIS/R utilized an energy mix appropriate for the Northeast region. See Volume I, Sections 4.6 and 4.10.*

CT 4-19.8

Comment: These views [from homes in West Mystic, CT.] will be impacted by the catenary installation.

Response: *This area has been evaluated in Volume I, Section 4.11 of the FEIS/R.*

CT 4-19.9

Comment: Volume I of the DEIS states that the FRA is not directed to close at-grade crossings, however Vol. III states that the closings will be closely related to the electrification.

Response: *The reference in Volume III of the DEIS/R has been corrected. The Proposed Action does not propose the closing of any at-grade crossings.*

CT 4-19.10

Comment: The DEIS does not adequately address alternative routings.

Response: *See Response 3.1 in this volume.*

CT 4-19.11

Comment: The existing bridges were not designed for and have not been maintained adequately to support high speed rail. The steel and iron is seriously deteriorated, the old stone and concrete abutments will suffer impact loading as the high speed train crosses the rail gap at the bridge.

Response: *See response to Comment CT 1-2.9.*

CT 4-19.12

Comment: Curtailing freight use of the shoreline will negatively impact Federal and State plans for New London harbor economic development.

Response: *Freight traffic growth on the NEC can be accommodated without an increase in daytime daily freight train operations between Groton and New Haven. The major pier facilities at New London Harbor are served by the Central*

Vermont Railway and its line from New London to the Canadian border at East Albany (VT). Freight train service to the New London major commercial pier facilities does not involve train operations along the NEC. The Central Vermont freight line provides substantially higher vertical clearances suitable for modern rail-water intermodal traffic when contrasted to the limited clearance now existent along the Shore Line. Also see Response 3.3 in this volume.

CT 4-19.13

Comment: Many of the woodland designations (or more precisely, the lack of woodland designation) do not agree with State of Ct. and Town wetland maps. Use of the State and the Town maps would increase the wetlands impact of the project.

Response: *The comment from Mr. Cannon assumes that state and local wetland and soils maps are correct. The field conditions encountered indicated that some of the sites, namely Old Lyme paralleling station and Millstone paralleling station, were actually areas of old fill materials which would not qualify as poorly drained under the state of Connecticut criteria or as wetland under the 1987 ACOE wetland delineation manual.*

The State-line paralleling station site did not contain poorly drained soils nor did it meet any of the three parameters in the 1987 ACOE wetland delineation manual. Amtrak or the permitting consultant will petition DEP to re-classify these sites. Supporting documentation will be provided at that time. Overall, the wetland impact acreage calculated for the EIS is believed to be accurate.

CT 4-19.14

Comment: The DEIS states that catenary poles will be located 250, then 200, then 175 feet apart. The 12,000 poles in 156 miles equals 137 foot spacing. Does anyone know?

Response: *The proposed 13,000 catenary support poles will be spaced approximately 220 feet on tangent, high speed track not*

exposed to high winds. The poles will be spaced closer together at locations subject to high winds and on curves. The closest pole spacing will be approximately 75 feet on the tightest curves.

CT 4-19.15

Comment: Photos of the catenary poles do not show any shading or shadows, thereby minimizing the visual impact.

Response: *The poles shown in the DEIS/R photos were representative of drawings provided by the designer. As shadowing will depend greatly on the placement of the pole and the relative position of the sun, it is impossible to depict the exact impact of shadows at any one site.*

CT 4-19.16

Comment: The catenary poles originally were shown carrying a single wire, current poles show two wires per pole. What is correct?

Response: *The catenary poles will carry 4 wires between Roxbury and Branford (messenger, contact, feeder, and static wires). West of Branford and east of Roxbury, there will be three wires over each track (the feeder wire is eliminated).*

CT 4-19.17

Comment: The paralleling station in Noank is reportedly built in an abandoned parking lot. This lot is the main parking for the only beach in the Town of Groton.

Response: *An alternative site has been found for the Noank paralleling station. Volume I, Appendix A of the FEIS/S presents the new plan.*

CT 4-19.18

Comment: Volume III, Study 3 states that the way to mitigate at 110db is to buy and raze the homes. Is this really the policy of the US Government.

Response: *No reference to this statement was found in Volume III of the DEIS/R.*

CT 4-19.19

Comment: Volume III, Study 5 needs to be reviewed and concurred to by a panel of competent engineering and cancer experts before it is accepted for decision making by the FRA.

Response: *We do not agree. The contractor support included competent engineers and EMF experts, who reviewed literature findings written by other experts who disagree.*

Gayle Tyler

CT 4-20.1

Comment: As proved by the Swedish study, this proposal would truly be a health hazard to our towns.

Response: *See Response 3.5 in this volume.*

Dora Hill

CT 4-21.1

Comment: The report states that train noise is caused by the rolling interaction of train wheels on the track rail, and the noise resulting from this interaction increases at greater speeds. This factor, combined with greater frequency, could result in a greater dose of noise energy at a given location in a 24-hour period, the report states. So, runs from 20 to 52 minutes daily will increase the impact of train noise on residences adjacent to the railroad.

Response: *The general conclusion of this study is that increased frequency of train operations would increase noise levels adjacent to the right-of-way. See Response 3.6 in this volume.*

CT 4-21.2

Comment: The report states that train vibration is caused by the rolling interaction of train wheels on the track rails, and the vibration resulting from this interaction increases with greater speeds. This factor, combined with greater frequency, could result in a greater dose of vibration energy at a given location in a 24-hour period, the report states.

Response: *This is a general conclusion of this study. See Response 3.6 in this volume.*

CT 4-21.3

Comment: The report states that the source of noise at the electrification facilities would come from transformers and ventilation equipment. Table 4.4.5 indicates that the State Line, CT paralleling station proposed at Mechanic in Pawcatuck may exceed the impact threshold for residences located in the impact zone.

Response: *The report indicates that the State Line, CT paralleling station may cause noise levels to exceed the impact threshold at five nearby residences. However, mitigation measures will be included in the design of this facility as needed to reduce noise levels below the impact threshold at these locations.*

CT 4-21.4

Comment: The report dismisses as "modest" any impact that electrification may have on the Mechanic Street Historic in Pawcatuck. I do not accept this assessment. A large number of homes in this Historic District are adjacent to the railroad and will be adversely affected by the catenary poles and electrical wires.

Response: *In response to this comment, The project's Senior Historian and a representative of the Connecticut Historical Commission conducted a site visit of the Mechanic Street Historic District. The conclusions of their review, documented in a June 7, 1994 memorandum, are that "except where it crosses Palmer Street, the right-of-way, while discernible, is not a major visual component within the district; the catenary will not be an adverse effect."*

CT 4-21.5

Comment: The report states that the State Line, CT paralleling Station proposed for the Mechanic Street, Pawcatuck location will have no impact on wetlands because none exist, even though the area is classified as wetlands on State of Connecticut soil maps.

Response: *The State-Line paralleling station in Pawcatuck is indicated as poorly drained soils on state soils maps, which would indicate the area is a wetland. Wetlands*

and a stream are located over 100 feet to the south, however, this sloped site does not contain poorly drained soils or meet the criteria outlined in the 1987 ACOE wetland delineation manual.

Large scale soil maps such as those provided by the state and U.S. Soil Conservation Service are an excellent representation of soil conditions, but often they are not detailed enough to deal with small parcels of land, and often they have inclusions of other soil types within the type mapped.

CT 4-21.6

Comment: The Westerly, RI station is not listed as a station where parking demand is expected to increase. So, Pawcatuck residents who use the Westerly station for travel needs will receive no benefit from the electrification project.

Response: See response to Comment CT 4-12.2.

CT 4-21.7

Comment: The report states that it is possible that some of the external effects of the proposed electrification, including increased noise, increased vibration, degradation of sensitive views, and public concerns regarding electromagnetic fields, may have an effect on property values, although, it reports, such affects cannot be documented or quantified. What does FRA plan to do to compensate Pawcatuck residents who experience property devaluation as a result of the electrification?

Response: Impacts from these aspects are discussed in Volume I, sections 4.5 and 4.11, and mitigation is discussed in section 5.1.

CT 4-21.8

Comment: There are conflicting expert opinions and evidence as to the adverse effects on humans of long-term exposure to electromagnetic fields. It is unfortunate and unacceptable that only guidelines and inconclusive evidence are used to assess this important health aspect, and that it is dismissed with "no adverse impacts are anticipated," on page 5-21 [Volume I

DEIS/R].

Response: Comment noted. Volume I, Sections 3.5 and 4.5 of the FEIS/R present an updated discussion of the EMF issue. This discussion is also summarized at the beginning of this volume.

Kristin & Bob Harteers

CT 4-22.1

Comment: Closing the crossing [Freeman's Crossing] is unnecessary. The present system of gates and bells has been 100% successful; there have been no safety problems since the system was installed nearly ten years ago.

Response: See Response 3.8 in this volume.

CT 4-22.2

Comment: The cost of closing the crossing would be a gross waste of taxpayers' money. The report proposes paying \$1,230,000 to the Freeman family for eliminating access rights to the island, an amount that would be challenged in court as utterly inadequate to compensate the family for the loss incurred.

Response: See Response 3.8 in this volume.

CT 4-22.3

Comment: Eliminating access to the shoreline is contrary to state and federal policies, which encourage access to the coastline. Hundreds of people use the [Elihu] island every year.

Response: See Response 3.8 in this volume.

David H. Wesson

CT 4-23.1

Comment: Closing [Freeman's] crossing is unnecessary. The present system of gates and bells has been 100% successful; there have been no safety problems since the system was installed nearly ten years ago.

Response: See Response 3.8 in this volume.

CT 4-23.2

Comment: The cost of closing the crossing would be a gross waste of taxpayers' money. The report proposes paying \$1,230,000 to the

Freeman family for eliminating access rights to the island, an amount that would be challenged in court as utterly inadequate to compensate the family for the loss incurred.

Response: *See Response 3.8 in this volume.*

CT 4-23.3

Comment: Eliminating access to the shoreline is contrary to state and federal policies, which encourage access to the coastline. Hundreds of people use the island every year.

Response: *See Response 3.8 in this volume.*

Roger H. Dickinson

CT 4-24.1

Comment: We don't need faster, more frequent trains to increase passenger patronage, Amtrak should provide better on-time service and more convenient stops and schedules.

Response: *Comment noted.*

Ron Lewis

CT 4-25.1

Comment: Wildlife is under-counted.

Response: *A "wildlife count" was not part of the review process, nor would it be indicative of the impact of the electrification project.*

Wildlife habitat impacts associated with the project were reviewed, including impacts resulting from electrical facilities, bridge renovation, installation of submarine cables, and other construction. This information is provided in the DEIS/R, Volumes I and III, which are available at public libraries along the project corridor.

CT 4-25.2

Comment: Areas of wetlands are totally overlooked or ignored.

Response: *Wetlands were identified and mapped at each of the impact locations including electrical facilities and bridge modification areas. All other work is expected to occur within the existing*

right-of-way and is therefore not expected to disrupt adjacent wetlands.

CT 4-25.3

Comment: Visual impacts are ridiculously under reported.

Response: *Volume I, Section 4.11 of the FEIS/R contains an revised list of visual impacts.*

CT 4-25.4

Comment: The health impact of electromagnetic fields is ignored, while evidence mounts of its cancer causing effects.

Response: *See Response 3.5 in this volume.*

Betty Richards

CT 4-26.1

Comment: At the Wamphassuc Point crossing, where construction of an overpass is recommended, two houses have been constructed which are in the path of the proposed overpass.

Response: *See Response 3.8 in this volume.*

CT 4-26.2

Comment: Additionally, a private road, shown on your maps, has been rerouted.

Response: *Volume II of the DEIS/R (Land Use and Regulated Areas) is not being republished as part of the FEIS/R. All inaccuracies identified in these maps are being noted on the official copy of these maps to be included in the Administrative Record maintained by FRA. The corrected maps are available for public review at the Volpe Center in Cambridge, MA or FRA's office in Washington, DC.*

Tad Stul

CT 4-27.1

Comment: Pg. ES-10 5.28 - I am not listed as one of the residences that have sensitive views.

Response: *Volume I, Section 3.11 of the FEIS/R contains a revised list of visually sensitive areas. This residence was evaluated and is listed on Table 3.11-1.*

CT 4-27.2

Comment: Pg. 2-3 2.2.4 - Not enough consideration was addressed as to Route Alternatives.

Response: *See Response 3.1 in this volume.*

CT 4-27.3

Comment: Pg. 2-13 2.4.44 - What impact will there be on our ospreys that build nests on top of the existing CL&P poles on the Amtrak right-of-way?

Response: *No increase in impacts to nesting ospreys or other nesting wildlife are expected to occur. To insure that ospreys will not be disturbed by construction all activities adjacent to known osprey nesting sites will be avoided from April 15 through August 15.*

Amtrak or its agent will ask the appropriate state and fish and wildlife office to indicate known nesting areas to be avoided.

CT 4-27.4

Comment: Pg. 2-12 2.4.23 - What will the environmental impact be on more wires from the substations to the catenary and how will the power arrive to the substations?

Response: *As discussed in Volume I, Section 2.4 of the FEIS/R, power from an existing substation is carried to other substations by an aerial or underground line. Lines to the Branford and Warwick substations are aerial; those to New London and Roxbury are underground. Osprey issues relating to wires and towers are addressed in Comment CT 4-27.3, above.*

CT 4-27.5

Comment: Pg. 3-3 3.1.4 - You did not look into the effect a major hurricane would have on the track bed and the catenary system.

Response: *Volume I, Section 4.8 discusses the issues of weather impacts on the catenary system. The system is designed to withstand substantial wind forces. It is likely that Amtrak would not operate during a hurricane.*

CT 4-27.6

Comment: Pg. 3-3 - pg. 3-4 3.2.4.2 - Not listed is the Mashatucket Land Trust in Stonington.

Response: *This error has been corrected in the FEIS/R.*

CT 4-27.7

Comment: Pg. 3-31 - 3.12.1.1 - More work needs to be done to identify the wildlife habitats that would be directly effected. The migration needs to be studied over a period of time.

Response: *Encroachment on previously undisturbed habitats is limited to construction of substations, paralleling stations and switching stations associated with electrification, as well as the installation of submarine cables. Some encroachment on adjacent habitats may occur at certain bridge sites which will need to be raised to accommodate the catenary system.*

Other work associated with the project is expected to occur within the existing right-of-way, which is a heavily disturbed habitat with little food, cover and nesting opportunities for wildlife.

The FEIS also addresses impacts to wildlife associated with proposed fencing locations, as well as a more detailed assessment of impacts associated with submarine cable installation.

Any "migration" associated with the NECIP would be catadromous and anadromous fish species, which are addressed in the FEIS/R.. No impacts on these species are anticipated. Other migrations, such as birds and marine mammals would not be expected to be impacted by the project.

CT 4-27.8

Comment: Pg. 3-31 3.12.1.1 - What is planned to protect our state listed endangered species?

Response: *State-listed endangered or protected species were identified through the appropriate state Natural Heritage*

program. In Connecticut, the Natural Diversity Database was consulted on all new sites along the rail line including proposed bridge construction. The federally listed Shortnose Sturgeon (*Acipenser brevirostrus*), in the Connecticut River, and State-listed American bitterns (*Botaurus lentiginosus*) were reported as occurring in Connecticut. Further consultation was conducted with appropriate agencies to incorporate measures into the project that will ensure impacts to these species are minimized. See Volume I, Sections 4.12 and 5.1 for further discussion.

CT 4-27.9

Comment: Pg. 4-3 4.2.2 - The potential impact on property values and tax revenues should be further studied.

Response: See response to Comment CT 3-14.7.

Amy Cochran

CT 4-28.1

Comment: The proposed overpass [at School Street in West Mystic] would destroy the character of West Mystic, at huge public expense and with no concern for the community.

Response: See Response 3.8 in this volume.

Beatrice Minson

CT 4-29.1

Comment: [The writer opposes the project because of its impact on the environment and landscape and refers to another letter which is extracted as CT 4-111 in this volume.]

Response: Comment noted.

Ed Ogren

CT 4-30.1

Comment: Why with just one quick, foolish move you can injure or kill several people with speeding trains & highly charged electrical lines.

Response: Comment noted.

CT 4-30.2

Comment: Don't ruin the beautiful Connecticut shoreline.

Response: Comment noted.

Jan Alling

CT 4-31.1

Comment: I live at 41 Seaview Condos and I cannot imagine the noise and vibration of 32 trains passing by every day. I question the affect on the wildlife in the salt marsh, and the overhead wires would be an eye-sore.

Response: Volume I, Sections 4.4, 4.11 and 4.12 of the FEIS/R discuss noise and vibration, visual impacts, and impacts to wildlife, respectively.

CT 4-31.2

Comment: I think that it would bring our property values down to have the high speed train put into service.

Response: Volume I, Section 4.2 of the FEIS/R discusses potential impacts to property values and municipal tax revenues.

Nancy J. Knowles

CT 4-32.1

Comment: This writer is opposed to the project.

Response: Comment noted.

William H. Fuhier

CT 4-33.1

Comment: It appears that more studies should be provided to evaluate the impact on river traffic (commercial & pleasure).

Response: See Response 3.4 in this volume.

CT 4-33.2

Comment: Vibration problems are difficult to comprehend and if you will explain how far from the track the vibrations will be felt, it would be more meaningful.

Response: The distance from the track within which train vibrations will be felt may vary significantly depending on the train type and speed, the sensitivity of the observer and the site-specific characteristics of the ground and the building structure in which the observer is located. However, the generalized vibration projections developed based on measurements along the Northeast Corridor suggest that for

existing diesel and electric trains, ground-borne vibrations are perceptible at locations within about 150, 200 and 300 feet of the track for trains at 50 mph, 90 mph and 150 mph, respectively. For some newer equipment, such as the X-2000 trainset, these vibrations would be about 30 percent less. It should be noted, however, that vibration impact was not assessed based on the threshold of human perception, but rather on levels above this threshold that represent significant annoyance. It should also be noted that train vibrations are already perceptible at many locations under existing conditions, and that vibration impact was assessed based on the increase in level and/or number of events exceeding the criteria.

Carlene F. Donnarummo

CT 4-34.1

Comment: The comment letter addresses issues surrounding the closing of an at-grade crossing in Stonington, CT.

Response: See Response 3.8 in this volume.

Jonathan A. Gibson

CT 4-35.1

Comment: I would like to see a more thorough study done on the electromagnetic fields (EMFs) and their impacts on human health, wild life, aquatic life, and airwave transmission interference.

Response: See Response 3.5 in this volume.

CT 4-35.2

Comment: It is my opinion that the DEIS oversimplifies and underestimates the wide diversity of impacts to life in general from NECIP Electrification. There needs to be more research, a lot more, before proceeding with this project and jeopardizing our lives.

Response: Comment noted.

James J. Musante

CT 4-36.1

Comment: Some citizens were mailed the entire 3 volume set of DEIS/R documents. How were they selected? Why were others excluded? So, at the outset, the basic act

of distribution of the DEIS was preferential to some and prejudicial to others who were denied their right to equal access to public information.

Response: FRA intended to send a complete set of the DEIS/R to all elected officials, municipal offices, libraries, and agencies. However, some citizens inadvertently received an entire set.

CT 4-36.2

Comment: Volume II: The mysteriously compiled mailing list resulting in preferential distribution is a mark of incompetence. This is true of volume III also.

Response: See response to Comment CT 4-36.1

CT 4-36.3

Comment: The maps of Vol. II depict detail that is illegible.

Response: The scale of the maps in Volume II of the DEIS/R is a compromise between detail and context. Small scale maps provide greater detail, but tend to lose the regional context necessary to look at cumulative impacts.

CT 4-36.4

Comment: Volume III: Page 2-6, Par. 2.3.2 Property Value Impact. The DEIS is deficient in projecting the negative impact on property values due to increased noise, vibration, and adverse visual effect. The document fails to cover this issue with any degree of substance or accuracy.

Response: Comment noted. The DEIS/R was unable to quantify any potential impacts to property values as the study found no data to support the conclusion that installation of a catenary system would have direct impacts on property values. Town assessors were contacted and a literature search was conducted

CT 4-36.5

Comment: One measurement was stopped after 2.5 hours instead of the proscribed 24-hour duration. The DEIS offers no excuse or explanation. Why wasn't a complete, valid noise monitoring done at this location?

Response: *The measurement in question, at site A-3a, was made in response to a resident's specific concerns about train vibration at this location. Prior to the testing date, this supplementary site was not included in the original measurement plan, but was fit in during the measurement program when this concern surfaced. Since the concern related to vibration, the measurements focused on obtaining vibration data for trains over the few hours available. Although noise data were also obtained during this period, the measurement schedule did not allow a full 24-hour noise measurement at this supplementary site.*

CT 4-36.6

Comment: How many other invalid tests were falsely conducted, their results lumped with other results, then bestowed with credibility through publication?

Response: *FRA disagrees with the unsubstantiated comment that any tests were falsely conducted. To the extent that technical errors have been identified in reviewing the analyses conducted as part of this FEIS/R, they have been corrected.*

CT 4-36.7

Comment: Why was this aborted measurement [see Comment CT 4-36.5] revealed in Vol. III but concealed from readers of the widely distributed Vol I.

Response: *See response to Comment CT 4-36.5.*

CT 4-36.8

Comment: The DEIS fails to provide an assessment of an alternative Northeastern corridor.

Response: *See Response 3.1 in this volume.*

CT 4-36.9

Comment: The DEIS fails to provide a more comprehensive coverage of existing equipment technology.

Response: *See Response 3.2 in this volume.*

CT 4-36.10

Comment: Page ES-7 refers to the Noank paralleling station taking the Esker Point Beach parking lot. This is conveniently

omitted in the Land Use Table 3.1-1 on page B-3 in the Appendix.

Response: *As an alternative site for the Noank paralleling station has been found, this error is no longer of substance.*

CT 4-36.11

Comment: On page 1-29 of Vol. III the Noank paralleling station site is described as "indirect conflict with existing land use" and the only CT site in direct conflict with existing land use and with zoning. Then, in open contradiction, on page 1-14, Vol. III, the Noank facility is located in "an abandoned parking lot."

Response: *See response to Comment CT 4-36.10.*

CT 4-36.12

Comment: The DEIS engineering description of the planned paralleling station conveniently makes no reference to height. The Noank site is in wetland and floodplain. The facility is built to feed electricity to 30 foot high catenary wires, resulting in a noise transmitter, a constant EMF emitter and a visual rat's nest of wires soaring 32 feet above existing ground level. For an engineer to forget height is criminal; for the consultants to commit compound errors on the siting of this facility is incompetent and negligent.

Response: *Volume I, Section 4.11 discusses the potential visual impacts from this facility. See also response to Comment 4-36.10.*

CT 4-36.13

Comment: The DEIS refers only to the adverse visual impact on "235 Seneca Drive", intentionally failing to identify the full visual effect on beachgoers, restaurant patrons, other Seneca Drive residences, and houses across the cove that have unobstructed view of the eyesore.

Response: *The Noank Paralleling Station has been relocated out of this area. The new site is contained in Volume I, Appendix A. Also, see response to Comment CT 4-36.12.*

CT 4-36.14

Comment: On page 3-27 and again on pg. 4-43 this

vista is erroneously placed, in the DEIS, on Jordan Cove. The cove in the picture is Palmer Cove, about ten miles from Jordan Cove.

Response: *This error has been corrected in the FEIS/R.*

CT 4-36.15

Comment: Volume I Page 5-20 Figure 5.2-1. Areas of Potential Impact - neglects to include - (intentionally?) this Seneca Drive Visually Sensitive Area designation at Milepost 129.4.

Response: *The visually sensitive area indicator between mile post 129 and 130 in this figure was intended to represent the Seneca Drive area near milepost 129.4. This figure has been modified to represent this area more comprehensively.*

CT 4-36.16

Comment: Fails to mark the Adverse Vibration Impact recorded at Mileposts 129.3 and 129.8 which exceeds the established acceptable vibration threshold.

Response: *This error in the DEIS/R is acknowledged, and refined impact estimates are presented in the FEIS/R. Along this area of the Northeast Corridor in Groton, CT, the FEIS/R analysis indicates potential adverse vibration impact at Mileposts 129.4, 129.6 and 129.9-130.2 under Worst Case Build project alternative.*

CT 4-36.17

Comment: The DEIS fails to recognize the other properties on Seneca Drive with clear sight of the same impacted view -- or -- properties to the south of the railroad impacted.

Response: *See response to Comment CT 4-36.13.*

CT 4-36.18

Comment: The electromagnetic (EMF) threat was dismissed as lacking scientific proof.

Response: *The "EMF Threat" was not "dismissed as lacking scientific proof", but carefully assessed in light of the most recent*

findings. the lack of scientific proof and consensus is still evident (see Chapter 5 of Volume II of the FEIS/R).

CT 4-36.19

Comment: Why weren't EMF measurements experienced in Sweden reported in the DEIS?

Response: *Questions regarding the absence of Swedish studies in the DEIS/R have now been addressed by updating the technical literature reviewed. At the time of the DEIS/R preparation, the Swedish and other (Danish and Norwegian) studies had not appeared in peer-review journals.*

CT 4-36.20

Comment: This issue, how the recorded, measurable, increased noise affects the quality of life of residents, neighbors, and wildlife along the tracks, has been treated in a most unprofessional, biased, and negligent manner.

Response: *Comment noted.*

CT 4-36.21

Comment: By taking noise levels at three locations where the horn is sounded for [at-grade crossings] or bridges, the consultant insured that the same model used in the high-speed future would yield "no increase."

Response: *Horn noise was modelled to occur at the same level over a 1/4-mile track segment preceding each at-grade crossing for both existing and future conditions. Although a projected increase in train speed (and related decrease in exposure time) generally led to a reduction in noise exposure, this was more than compensated for by an increase in noise exposure due to the increased number of future trains. For example, the noise exposure at measurement sites A-3a and A-4, both near grade crossings, was projected to increase by 4 DBA, resulting in adverse noise impact. Furthermore, it should be noted that the noise criteria are more stringent near grade crossings, allowing less of a noise increase than at other locations where existing noise*

levels are lower.

CT 4-36.22

Comment: You even avoided any measure at all of the "sound over water" factor.

Response: *The train noise model, intended for general application to typical conditions along the entire rail corridor, includes only a small amount of noise reduction due to sound propagation over the ground. However, this reduction, which would not occur for sound travelling directly over water, is not significant within a few hundred feet of the tracks, where most all noise impact occurs. Furthermore, the same future noise increase would be projected no matter which propagation model were used. Thus, the use of a different model for sound propagation over water would not affect the results of the noise impact analysis and a site-specific evaluation of this condition was not warranted.*

CT 4-36.23

Comment: Why weren't noise readings taken and reported in the DEIS of the recent Swedish train high-speed run on segments of New Jersey and Pennsylvania track? Or the German train run?

Response: *Noise and vibration measurements of the Swedish X2000 tilt train, operating on the Northeast Corridor in New Jersey, were made during March 1993 and were reported in Section 4.4 of the Noise and Vibration Technical Study in Volume III of the DEIS/R. Similar measurements were made of the German InterCity Express (ICE) trainset during November 1993, and the results are reported in Chapter 4 of Volume II of the FEIS/R.*

CT 4-36.24

Comment: Why aren't existing noise levels in Sweden or Germany reported?

Response: *Only limited data are available for the X2000 and ICE trains operating in Europe. To obtain more comprehensive data that are most relevant to operations in the U.S., noise measurements of these trains were made during their*

demonstration program operations on the Northeast Corridor.

CT 4-36.25

Comment: The study does not mention horn or hum of paralleling station.

Response: *Although the overall summary statements correctly attribute the major project-wide noise impact to the increase in wheel/rail noise with speed and to the increased operations, the study does address site-specific noise from train horns and electrical facilities. Horn noise is included in the noise prediction model for locations near at-grade crossings, and the potential hum from electrical facility equipment is considered in the noise impact criteria for these facilities. Details are included in Technical Study 4 of DEIS/R, Volume III, which has been placed in town libraries along the project corridor.*

CT 4-36.26

Comment: The potential for a major economic interruption of recreational and commercial marine activity by constricting water passage through closed rail bridges with its obstruction of unrestricted submarine movement and subsequent threat to the future existence of the Groton, CT Navy Base will be an economic disaster.

Response: *See Response 3.4 in this volume.*

CT 4-36.27

Comment: The maintenance of the track and roadbed, switches, etc., due to the punishment of high-speed trains, will be exponentially increased, causing so much down-time that the "reduced travel time goal" will be unattainable.

Response: *Amtrak already operates a high-speed rail line (the NEC between Washington and New York City) which has substantially more traffic than is projected for the study area. For over 10 years of 125 mph operation, Amtrak has shown that reliable maintenance of track to the standards required for high-speed service is achievable.*

CT 4-36.28

Comment: Nor is there mention of the increased noise of construction due to the added destruction and wear of high speed trains, and thus, said maintenance to be performed primarily during the night, sleeping hours, denying the peace required for life to those within hearing.

Response: *Amtrak traditionally performs its annual and long-term maintenance of the rail line during night-time hours in order to minimize adverse impacts to train schedules and reliability. This is not expected to change with the introduction of faster train service. However, with the installation of new continuous-welded rail, new concrete ties, and a new signal and electrification system, maintenance requirements are expected to be reduced significantly. For example, concrete ties have a projected life expectancy in excess of 50 years, which means that ties should not have to be replaced again until the middle of next century.*

William A. Victoria

CT 4-37.1

Comment: Each boat owner will be in the range of "EMF" from 0 to 400 ft.

Response: *In the event that boat owners are within 150 feet of the catenary system, when it is activated by a train in the vicinity, boat owners would be exposed to magnetic field strength on the order of those presented in Volume III of the DEIS/R, Section 5.5.3 (0.2 mG to 9.3 mG). Beyond 150 feet of catenary system, exposure to magnetic fields may occur, but typically at levels which are indistinguishable from normal background levels (DEIS/R Volume III, Section 5.4.3). For further review, this volume has been placed in municipal libraries along the project corridor.*

CT 4-37.2

Comment: We are against the closing of any crossing.

Response: *See Response 3.8 in this volume.*

Kathleen Meaney

CT 4-38.1

Comment: There is no need for this service [high speed train].

Response: *The need and purpose of this project is discussed in Volume I, Chapter 1 of the FEIS/R.*

CT 4-38.2

Comment: The increased amount of trains would not only effectively cut off the shoreline from marine traffic, but also create a hazardous and unsafe situation for abutters and shoreline people.

Response: *The issue of the proposed project's impact on marine traffic is discussed in Volume I, Section 4.9 of the FEIS/R. This issue is also summarized at the beginning of Volume III. Public safety is discussed in Volume I, Sections 3.8 and 4.8 of the FEIS/R.*

CT 4-38.3

Comment: There is also the noise pollution.

Response: *See Response 3.6 in this volume.*

CT 4-38.4

Comment: The unsuitability of the curvaceous Connecticut coastline for such high speed trains.

Response: *See response to Comment CT 4-14.8.*

CT 4-38.5

Comment: No benefits to the residents of Connecticut.

Response: *See response to Comment CT 1-1.7.*

CT 4-38.6

Comment: There is also the real potential of environmental damage from the EMF field to humans and wildlife.

Response: *See Response 3.5 in this volume.*

G. R. Munger

CT 4-39.1

Comment: Can the impact of electromagnetic fields on humans and animals be proven negligible?

Response: *It is very difficult to prove that any phenomenon (naturally occurring or man made) is not harmful to humans. It is easier to prove that something is harmful. In the case of EMFs, one needs to look at two issues: are the receptors (people or animals) exposed to the EMFs and what is the impact (harm) of that exposure. It is on the answer to that latter question that there is a lack of scientific consensus. The exposure assessment in the DEIS/R concludes that all potentially exposed populations are exposed at levels hundreds to thousands of times lower than the levels established in interim guidelines set forth by the international scientific community. The existing research on EMFs and impacts to humans and animals is presented in Volume I, Section 4.5 of the FEIS/R and is also summarized at the beginning of this volume.*

CT 4-39.2

Comment: Why the extreme cost to electrify when diesels could do the job?

Response: *See Response 3.2 in this volume.*

CT 4-39.3

Comment: I can't see how the commuter rail service could survive - and it's important.

Response: *See response to Comment CT 1-3.8.*

CT 4-39.4

Comment: How would rail freight be affected?

Response: *See Response 3.3 in this volume.*

Eleanor & William Andrew

CT 4-40.1

Comment: Our access to deep water would be drastically curtailed by changes to existing structures.

Response: *See Response 3.4 in this volume*

CT 4-40.2

Comment: The industries dependent upon existing freight lines on the AMTRAK, as well as shipping deliveries of fuel and freight would be disconnected if electrification is accomplished.

Response: *See Response 3.3 in this volume.*

CT 4-40.3

Comment: [I oppose the project because of the] long-term economic decline resulting from this, as well as the potential losses to tourism.

Response: *Comment noted.*

William W. Harsch

CT 4-41.1

Comment: Accordingly, I renew on behalf of Citizens Against the Amtrak Electrification Project and the many individuals signing the attached petitions, the request for a modest and justified extension to the DEIS comment period to February 1, 1994.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and weeks, respectively, to January 21, 1994.*

Melissa Avedy

CT 4-42.1

Comment: I am concerned about the potential dangers of EMF exposure.

Response: *See Response 3.5 in this volume.*

CT 4-42.2

Comment: There is minimal benefit saving a little time in travel for a few people at tremendous economic & environmental cost.

Response: *Comment noted.*

CT 4-42.3

Comment: There are increased dangers at rail crossings.

Response: *See response to Comment CT 1-4.18.*

CT 4-42.4

Comment: I am concerned about limited and lost access to land.

Response: *For safety reasons, Amtrak prohibits unauthorized access to the railroad right-of-way. As the right-of-way is private property, unauthorized access constitutes trespassing, and it is Amtrak's stated*

policy to aggressively enforce the trespassing statutes. Due to the safety concerns of pedestrians crossing the tracks, FRA plans to require certain areas of the right-of-way to be fenced. In some areas this may hinder access to recreational resources. In a letter from Richard Hill, dated June 10, 1994, Amtrak stated that it will work with the local authorities to identify opportunities to encourage access without impacting public safety. These issues will be addressed on a site-specific basis. The proposed project does not eliminate any existing, legal points of access across the tracks, therefore, the study does not find an impact regarding this issue.

CT 4-42.5

Comment: I am concerned about noise and visual pollution.

Response: *Comment noted. Also refer to Responses 3.6 and 3.7 in this volume.*

CT 4-42.6

Comment: I am concerned about damage to wetlands.

Response: *Comment noted. Also refer to Volume I, Section 4.12 of the FEIS/R.*

CT 4-42.7

Comment: I am concerned about loss of navigable water access by increased traffic.

Response: *Comment noted. Also see Response 3.4 in this volume.*

CT 4-42.8

Comment: I am concerned about loss of value to existing businesses.

Response: *Comment noted.*

CT 4-42.9

Comment: I am concerned about loss of value to properties.

Response: *Comment noted.*

CT 4-42.10

Comment: I am concerned about loss of tax base.

Response: *Comment noted.*

CT 4-42.11

Comment: I am concerned about the lack of consideration for local populations which will be affected by these changes which provide very little benefit.

Response: *See response to Comment CT 1-1.7.*

CT 4-42.12

Comment: I am concerned about increased risk of loss of endangered species (shortnose sturgeon.)

Response: *The federally listed endangered species, Shortnosed Sturgeon, was identified in the Connecticut River by the U.S. Fish and Wildlife Service. A biological assessment has been prepared as required under Section 7 of the Endangered Species Act which concluded that the species will not be adversely affected by the project.*

CT 4-42.13

Comment: I am concerned about increased disturbance to many indigenous species - damage to habitats, and food sources.

Response: *Comment noted. See Volume I, Section 4.12 for impacts to natural resources.*

Wallace & Carol Fenn

CT 4-43.1

Comment: Our major concern is that the movable bridges will be able to be opened much less frequently and this will have severe consequences for many people who are involved at all with boat traffic through any of the 5 bridges.

Response: *See Response 3.4 in this volume.*

CT 4-43.2

Comment: Another effect from increased rail traffic would be an impairment of the rail freight service in the region with a consequent economic impact on the freight carriers and the businesses that and jobs which depend on them.

Response: *See Response 3.3 in this volume.*

CT 4-43.3

Comment: The increased noise and vibration, impairment of views, and potential

danger from electro-magnetic fields will cause a reduction in real estate values.

Response: *Comment noted. See response to Comment CT 4-36.4.*

CT 4-43.4

Comment: Property owners will sue for reduction of their tax assessments with a consequent loss of revenue to the towns.

Response: *Comment noted.*

CT 4-43.5

Comment: In addition to these negative impacts on the people of the region, there are potential negative impacts to the railroad. Most of the bridges are old, and the increased vibration from more and faster trains will cause more maintenance.

Response: *See response to Comment CT 1-2.9.*

CT 4-43.6

Comment: An alternate route would be needed, and we think it should be considered now.

Response: *See Response 3.1 in this volume.*

CT 4-43.7

Comment: We are concerned about grade level crossings.

Response: *Comment noted. Also see Response 3.8 in this volume.*

CT 4-43.8

Comment: Concerns about endangered species need to be explored in depth.

Response: *Comment noted. See Volume I, Section 4.12 for discussion of impacts to endangered species.*

CDR Calvin E. Crouch

CT 4-44.1

Comment: The economic impact of the entire concept of greatly increasing the number of trains passing through the NEC on marine traffic and commerce.

Response: *See Response 3.4 in this volume.*

CT 4-44.2

Comment: I am concerned about the potential health

impact of electromagnetic radiation.

Response: *Comment noted. Also see Response 3.5 in this volume.*

R. H. Dickenson, Jr.

CT 4-45.1

Comment: I am opposed to the project because of increased risk of death/injury - pedestrians will be killed or injured by an increasing number of faster trains.

Response: *Comment noted.*

CT 4-45.2

Comment: I am opposed to the project because of environmental damage from underwater cables and increased traffic.

Response: *Comment noted.*

CT 4-45.3

Comment: I am opposed to the project because of visual pollution.

Response: *Comment noted. Also see Response 3.7 in this volume.*

CT 4-45.4

Comment: I am opposed to the project because of noise pollution.

Response: *Comment noted. Also see Response 3.6 in this volume.*

CT 4-45.5

Comment: I am opposed to the project because of major disruptions to fishing, shipping, and recreational boating.

Response: *Comment noted. Also see Response 3.4 in this volume.*

Eliot Porter

CT 4-46.1

Comment: This writer is opposed to the project because of environmental, ecological, and economic concerns.

Response: *Comment noted.*

Frank M. Holby

CT 4-47.1

Comment: They [FRA] propose a status quo on all present cove drainage, wetlands. This

would prevent increasing tidal flow to properly flush the wetlands which is one project that is necessary to help clean Long Island Sound.

Response: See response to Comment CT 1-14.8.

CT 4-47.2

Comment: Closing grade crossings would force many out of business, such as marinas, loss of homes, and cause congestion in rerouting traffic.

Response: See Response 3.8 in this volume.

CT 4-47.3

Comment: Increased rail traffic would slow access to river traffic through bridges for boats, barges and submarines.

Response: See Response 3.4 in this volume.

CT 4-47.4

Comment: Electromagnetic force has been proven harmful in Sweden and [the catenary system is] also an eyesore.

Response: See Responses 3.5 and 3.7 in this volume.

CT 4-47.5

Comment: Turbo electric would be a much cheaper means of locomotion. Wisconsin elected to use turbo electric trains between Milwaukee and Chicago instead of electro-magnetic because of the tremendous cost savings.

Response: Wisconsin has not acquired any high-speed trains. The commenter must be referring to the recent Chicago-Milwaukee corridor study prepared for the Wisconsin and Illinois Departments of Transportation. Under the heading of technology options, this report states: "It is recommended to use diesel-electric locomotives for high speed rail in the Chicago-Milwaukee Corridor because this technology requires the least capital improvements to the system, and is therefore the most cost efficient for the start-up of high-speed rail. If ridership and revenue increase to a level to warrant it in the future, a switch to all-electric trains should be evaluated. An

all-electric system would be meet both study goals for improving air quality and reducing auto congestion, because all-electric trains can travel at the highest speeds, reducing trip time and attracting more travelers out of their cars and onto high speed rail. Other environmental benefits accruing to the all-electric system include reduced noise and oxide emission, as well as lower energy consumption." (emphasis added, See Chicago-Milwaukee Rail Corridor Study, Phase I Report, Envirodyne Engineers for the Wisconsin Department of Transportation, October 1993. p. ES-13.) Interestingly, the cover of the phase II report released in March 1994, features a picture of the French TGV high-speed train operating under an overhead catenary system that is almost identical to that proposed as part of the Proposed Action.

CT 4-47.6

Comment: On what does the railroad base the increased number of trains?

Response: The increase in the number of trains is based on a study of passenger demand. The number is estimated from a number of factors including, expected population growth, speed of service, reductions in the speed of alternatives due to congestion, cost. The modelling of passenger demand is a two-step process. First, the model estimates the total number of passengers using any mode of transportation based on population growth and economics. Second, the model estimates the choice of mode (i.e., air, auto, or rail) based on the other factors. This type of "behavior model" is calibrated using historical data. Volume I, Section ES 3.1 of the FEIS/R discusses the issue of modal choice in general and the predicted shift of travellers from air and automobiles to rail specifically. Also see Response 3.9 in this volume.

Paul Bates

CT 4-48.1

Comment: I am requesting a 90 day extension on the comment period.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Jessica Morrissey Breen

CT 4-49.1

Comment: I am concerned about the risk of one or more of the Federal and state endangered species being extirpated. The shortnosed sturgeon and other marine life are highlighted in the attached schedules.

Response: *Comment noted. See response to Comment CT 3-38.47.*

CT 4-49.2

Comment: I am concerned about the conflict between commuter and freight traffic competing for the same rail and time.

Response: *Comment noted. See Response 3.3 in this volume.*

CT 4-49.3

Comment: I am concerned about the disruption of local businesses due to excessive bridge closings to accommodate more trains and higher speeds.

Response: *Comment noted. See Response 3.4 in this volume.*

CT 4-49.4

Comment: I am concerned about the danger of accidents resulting from the increased vibrations and faster trains on our bridges with eroded piers.

Response: *Comment noted. See response to Comment CT 1-2.9.*

CT 4-49.5

Comment: I am concerned about the health dangers resulting from high electric voltage, (electromagnetic field.)

Response: *Comment noted. Also see Response 3.5 in this volume.*

CT 4-49.6

Comment: Inappropriate closings of several crossings in the Stonington, CT section, has many tax payers and businesses up in arms regarding this project.

Response: *See Response 3.8 in this volume.*

Judith W. Neurath

CT 4-50.1

Comment: I request a 90 day delay for DEIS-R comments.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Elizabeth M. Dock

CT 4-51.1

Comment: Electrification of the line would have an enormous visual impact on the shoreline.

Response: *Comment noted..*

CT 4-51.2

Comment: But evidence that alternative-powered trains could be utilized makes us urge that this project be stopped at least until full study of the TURBO III or any other viable electric-alternative train could be completed.

Response: *Comment noted. Also see Response 3.2 in this volume.*

CT 4-51.3

Comment: The project would be detrimental to commuter rail service.

Response: *See response to Comment CT 1-3.8.*

CT 4-51.4

Comment: This "partnership" of freight and passenger service can not be compromised.

Response: *Comment noted. Also see Response 3.3 in this volume.*

CT 4-51.5

Comment: Dramatic increases in frequency and opening times will have serious consequences to pleasure and commercial boating along our major rivers, especially the Connecticut and the Thames.

Response: *See Response 3.4 in this volume.*

CT 4-51.6

Comment: Adjacent landowners will suffer serious noise level increases with the increased speed (and why weren't noise levels given in the DEIS?)

Response: *Volume III, Technical Study 4 of the DEIS/R presents projected noise levels. Also see Volume II, Chapter 4 and Response 3.6 in this volume*

Winnie Coleman

CT 4-52.1

Comment: I am concerned about electromagnetic radiation

Response: *Comment noted. See Response 3.5 in this volume.*

CT 4-52.2

Comment: A winding, curvy, heavily-populated coastline is not a viable location for high-speed trains.

Response: *See response to Comment CT 4-14.8.*

CT 4-52.3

Comment: I am concerned about increased noise.

Response: *Comment noted. See Response 3.6 in this volume.*

CT 4-52.4

Comment: I am concerned about increased vibration.

Response: *Comment noted. See Response 3.6 in this volume.*

CT 4-52.5

Comment: The project will have a negative impact on our wetlands and wildlife and may signal the end for several endangered species.

Response: *As discussed in Volume I, Section 4.12, the project would impact a limited amount of wetlands and wildlife. These impacts are addressed in Volume I, Section 5.1. Also see response to Comment CT 3-38.47.*

Jean & Don Simpson

CT 4-53.1

Comment: This writer is generally opposed to the

project.

Response: *Comment noted.*

Matthew J. Aannan

CT 4-54.1

Comment: I don't want brain tumors.

Response: *Comment noted.*

CT 4-54.2

Comment: I don't want up to 20 more trains blowing their already too loud horns passing by my house every day.

Response: *Comment noted.*

Ted Rice

CT 4-55.1

Comment: I am worried about the side effects of intense power.

Response: *Comment noted. Also see Response 3.5 in this volume.*

Zach Johnson

CT 4-56.1

Comment: I am concerned about the effects of the electromagnetic fields.

Response: *Comment noted. Also see Response 3.5 in this volume.*

M. Bruce Rieber

CT 4-57.1

Comment: This is a substantial and unacceptable increase in noise level. The criteria should be reset with no degradation goal and with limits on instantaneous noise levels (L_{max}). Further, the noise level criteria should be absolute.

Response: *The Northeast Corridor has been actively carrying passenger and freight rail traffic for many years. Because the electrification project involves only changes in train noise, rather than the introduction of a new source in the communities along the corridor, it would not be appropriate to use a rigid, absolute criterion for this project. Instead, the noise impact criteria are based on the projected increase in cumulative noise level relative to the existing noise environment. The criteria*

are based on Federal noise standards and on well-documented criteria and research into human response to community noise. Consisting of a combination of absolute and relative criteria, they allow less of a noise increase in already noisy areas than in areas with lower existing noise levels. The criteria are expressed in terms of L_{dn} or L_{eq} (24), which are measures of noise exposure over a 24-hour period. These measures have been found to correlate well with the effects of noise on people, and are the environmental noise measures recommended by the U.S. Environmental Protection Agency and other Federal agencies. The use of criteria based on L_{max} would not be appropriate since this measure does not account for the duration or frequency of occurrence of train noise and therefore would not be affected by changes in train length or schedule. Furthermore, the adoption of a "no degradation goal" would not be practical since any project related increase in train speed or frequency of operation, no matter how slight, would be deemed to cause significant noise impact along the entire project corridor.

CT 4-57.2

Comment: Wheel maintenance program is the first maintenance item discontinued when the budget gets tight. There should be an effort to design the equipment to minimize noise at the source.

Response: Amtrak reports that continuous wheel maintenance is required for safe train operation, proper ride quality and to minimize train impact on the track structure. Amtrak states that it would never be discontinued due to a tight budget, because that would result in greater losses than the cost of the wheel maintenance. Also see Volume I, Section 5.1 for discussion of source controls.

CT 4-57.3

Comment: Why hasn't light weight equipment been considered?

Response: In its procurement of high-speed rail

equipment, Amtrak is not specifying any specific weight of equipment. The specifications will be primarily performance based but will also require that the equipment meet FRA safety standards, AAR interchange rules, applicable laws such as the Americans with Disabilities Act, and that it is compatible with Northeast Corridor operations in terms of amenities and such other features as platform height. The competitors for this procurement will establish such design features as weight. Since lighter weight may offer better performance, there would be an incentive minimize the weight of this equipment.

Since the nature of the final design is not yet known, the analysis in the EIS used standard size equipment to yield conservative results.

Robert Gerrard

CT 4-58.1

Comment: In the very near future intercity train travel will face an increasing short-fall of passengers due to the increases in crime and the continuing exodus of jobs to the suburbs.

Response: The passenger demand model used to predict the number of travellers by the year 2010 shows an 94% increase in intercity rail travel. As rail offers intercity travellers a choice in station destination at some cities (e.g., Boston, Washington, New York), rail may gain additional passengers over air due to more accommodating station locations.

Rocca Dicesare

CT 4-59.1

Comment: The electrification project proposed will devalue my property.

Response: See response to Comment CT 1-9.1.

CT 4-59.2

Comment: I am opposed to increased noise.

Response: Comment noted. See Response 3.6 in this volume.

CT 4-59.3

Comment: Excessive increases in vibration will be

a detriment to those living in the immediate area.

Response: *Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential vibration impacts and appropriate mitigation. A summary of this discussion is included at the beginning of Volume III.*

CT 4-59.4

Comment: The effects of the electromagnetic fields will be a detriment.

Response: *Comment noted. See Response 3.5 in this volume.*

Karen Lewis

CT 4-60.1

Comment: In the DEIS, areas of wetlands were deleted.

Response: *Volume II of the DEIS/R was based on state GIS maps. In certain areas, wetlands and other resources were not properly identified. Field investigation were completed in many of these areas and the text of the report was revised to reflect these changes. In addition, an administrative copy of Volume II of the DEIS/R has been created with many of these corrections noted on the maps. This copy is not being published as part of the FEIS/R, but is available for public review at the Volpe National Transportation Systems Center in Cambridge, MA and the FRA offices in Washington, DC.*

CT 4-60.2

Comment: In the DEIS, visual impact on residences were ridiculously under reported.

Response: *See Response 3.7 in this volume.*

CT 4-60.3

Comment: Does the study explain how river traffic will run with railroad bridges raised to accommodate the volume of traffic?

Response: *See Response 3.4 in this volume.*

CT 4-60.4

Comment: What about the condition of the bridges and the track beds?

Response: *See response to Comments 1-2.9 and CT 4-18.8.*

CT 4-60.5

Comment: What happens in fog common on the coastline or when a hurricane hits?

Response: *In fog, rain and snow, trains are often the only forms of passenger transportation moving. Unusually severe weather such as hurricanes or tornados have the potential to damage electrification facilities. However, based on over 60 years of electric operation between New Haven and Washington, it has been shown that the rail system can recover quickly.*

CT 4-60.6

Comment: I am concerned about EMF.

Response: *Comment noted. See Response 3.5 in this volume.*

CT 4-60.7

Comment: To generate the electricity would pollute the air with whatever is used to produce the power.

Response: *Some forms of electric power generation create less air impacts than others. Volume I, Section 4.6 discusses revised figures for electric power generation in the NEC, and considers the resulting air pollutant emissions. As an example, hydropower (which accounts for 3.5 percent of power used in the study area) does not create any air pollutants.*

William A. Niering

CT 4-61.1

Comment: Wetland Ecology will be further degraded including loss of wetland acreage.

Response: *See response to Comment CT 4-52.5.*

CT 4-61.2

Comment: Explore viable alternatives which is required by law.

Response: *See response to Comment CT 1-1.6 and Responses 3.1 and 3.2 in this volume.*

CT 4-61.3

Comment: In Volume II of Land Use and Regulated Areas all the tidal wetlands are not shown in the color code.

Response: *See response to Comment CT 4-60.1.*

CT 4-61.4

Comment: The green symbol for Open Space also includes considerable wetlands. My point is that wetlands are not properly shown on maps which otherwise are excellent.

Response: *See response to Comment CT 4-60.1.*

Beryl & Cheryl Dominy

CT 4-62.1

Comment: The risk from EMF is tremendous.

Response: *See Response 3.5 in this volume.*

CT 4-62.2

Comment: The risk from high speed trains on old, outdated, and dilapidated bridges and tracks with numerous bends and twists is extremely high to boaters, riders of the railroad and animals living around the tracks.

Response: *See responses to Comments CT 1-2.9 and CT 4-14.8.*

CT 4-62.3

Comments: I will undoubtedly lose access to the Sound from my current boat dock because it is above the old, low railroad bridge on peaceful Palmer's Cove in Noank.

Response: *The electrification project as proposed will not impact the clearance between the water level and the underside of any bridge (fixed or movable) along the route.*

CT 4-62.4

Comment: [The Proposed Action will] essentially close the Connecticut and the Thames rivers to commercial and naval boat traffic.

Response: *See Response 3.4 in this volume.*

Carmen Anthony Pascuzzi

CT 4-63.1

Comment: The point I would like to make is that electrification of the railway lines are beneficial to all concerned.

Response: *Comment noted.*

Joseph E. Geary

CT 4-64.1

Comment: This project will limit views, increase noise, limit access to the water and decrease property values. But of most concern is the public health risk of utilizing 50,000 volts to drive these trains. The research into effects of electromagnetic fields (EMFs) on cancer is continuing to collect more and more indications that there is a direct link between the two.

Response: *See Responses 3.4, 3.6 and 3.7 in this volume.*

CT 4-64.2

Comment: General Comment - Figure ES.1-1 Is a map showing no impact on Connecticut wetlands and waterways. This is indicative of several important environmental matters in this report, as the report tends to downplay most problems identified with the project.

Response: *Figure ES 1-1 is cited as showing no impact to Connecticut wetlands and waterways. This figure is intended to be a site locus map only, illustrating the location of the route, and is not intended to show resource impacts.*

CT 4-64.3

Comment: I indicated that during recent storms many sailboats were washed up near the railroad tracks. If 50 kV wires had been in existence then many sailboats masts could come in contact with the wires. The report contained no mention of problems with sailboats in Stonington Harbor in severe storms.

Response: *In the event an object such as a sailboat mast strikes the catenary wires, detection devices at the substation will immediately (within milliseconds) de-energize the line. The line would be out of service*

until it is inspected by Amtrak.

CT 4-64.4

Comment: Bridge Clearances - Page 3-30 Volume one states "Bridge Clearance Projects in Stonington area - NONE". I measured the two bridges closest to my home and found the following:

- Measured clearance for Footbridge 18.5'
- Measured clearance for Viaduct 17.5'

Volume I page 2-16 indicates clearance required is 19.2' however Volume III page 3-3 indicates a 27.3' 25KV Feeder height and a 23' height requirement for the Contact Wire. Freight clearance requirements are even greater. This area is essentially wetlands, and any attempt to lower the tracks will result in water problems during storms.

Response: *1) Alpha Avenue has been replaced by the State with a bridge having a greater clearance. This project is complete.*

2) Amtrak will lower the track at Elm Street Footbridge approximately 8" and at Alpha Avenue approximately 4". Amtrak's investigations revealed that the ROW is built on rock which is approximately 4 feet below the tracks

Wire heights are at minimum 23 feet, except at bridges, where they are at least 19 feet, 2 inches .

The design of these areas will include adequate drainage to ensure that storm runoff can be diverted.

CT 4-64.5

Comment: At least 5 other residences on Chesebrough Lane have water views impacted.

Response: *This area has been further evaluated in Volume I, Section 3.11 of the FEIS/R.*

CT 4-64.6

Comment: The Chesebrough Lane Crossing was on the list of crossings on 19 November

1992 at the meeting in Stonington. Volume I Page 4-27 indicates that the Chesebrough Lane Crossing is eliminated from the list.

Response: *At the time when the physical survey was completed for the DEIS/R, this crossing was closed and was not considered an active crossing. As it is presently open, the FEIS/R has been revised to reflect this change.*

CT 4-64.7

Comment: These studies were conducted for the most part for 115,000 volts rather than the 25,000 volts planned for the electrification project.

Response: *The EMF investigations conducted for the DEIS/R have assessed EMFs from a variety of sources including 115 kv (60 Hz) transmission lines, 12.5 kv (60 Hz) catenary lines, 25 kv (50 Hz) catenary lines, as well as mix of voltage sources associated with background measurements in rural and urban settings. Discussions on these investigations are presented in Volume III of the DEIS, Sections 5.5.1 to 5.5.6. While the operating voltage is an important consideration in the design of the tie lines, power systems, and catenary lines, EMF emissions result from current flow (amperage) and their intensities are a direct function of the magnitude of the current (See Volume III, Section 5.5). The 25 kv design voltage of the NEC project is higher than most existing U.S. systems. This higher voltage results in proportionately lower current flows (and lower EMF levels) compared with other, lower voltage operating systems.*

CT 4-64.8

Comment: The report did not discuss the Swedish study that involved 1/2 million people over three decades that found the incidence of childhood leukemia tripled in homes near power lines.

Response: *The Swedish study of childhood leukemia, as well as the Danish and Finnish studies of childhood cancer, published after the DEIS/R was*

completed, are discussed in the additional study for the FEIS/R, Analysis of EMF Impacts on Children. Information contained in this additional study is presented in Volume I, Section 4.5 of the FEIS/R.

CT 4-64.9

Comments: The report did not discuss the Loma Linda study where the number of cancer cells were reported to increased 1 1/2 to 2 times in existing cancerous areas when exposed to EMFs versus areas not exposed.

Response: *The study cannot be identified from the information provided, and the comment does not contain a citation or reference. In the event that additional information is provided, a response will be prepared.*

CT 4-64.10

Comment: The study noted that adults are not affected as children are, then they set up standards based on "Adult Interim Guidelines".

Response: *There are no special exposure standards for children, only for the general public and occupational exposures. Special concerns for EMF effects on children are addressed in Chapter 5 of Volume II of the FEIS/R.*

CT 4-64.11

Comment: My concerns with the validity of measurements are: 1. One set of measurements were eliminated because they were "higher than the rest"; 2. Measurements were made with meters and integrating analyzers which do not measure true impulsive peaks, and the data were averaged over long periods of time such that EMF's appeared negligible; 3. The measurements were made at 12.5KV's rather than 50KV's expected for the new system; 4. Measurements were made with only one train on the track, no trains going in the other direction, and the train was not fully loaded; 5. There are no indications of the train status during the measurement (i.e. was the train "coasting" at speed?); and 6. There is no indication that current levels were

recorded during the test although EMF intensities are a function of current.

Response: *Refer to Technical Study Number 5 in Volume III of the DEIS/R and Section 4.5 in Volume II of the FEIS/R. Regarding the peak versus average magnetic field values measured, the relevant "dose metric" for biological effects has not been established. Most effects in the literature considered time averaged exposure. EMF values for 12.5 kV are about double those at 25 kV, for comparable power, because currents are higher (and so are EMF) for lower voltage. Measurements have been made by the FRA not only at 12.5 kV on the NEC electrified portion, but also on the TGV in France for 2 X 25 kV, 50 Hz catenary for a full range of operating conditions (including peak power and current - see reference for Volume I, Chapter 4 of the FEIS/R). Occupational and voluntary exposure are typically 50 - 100 times higher than the environmental exposure limits.*

CT 4-64.12

Comment: EMF measurements in the locomotive were 50 to 100 times the "beside track" measurements, although the report summarized it at only 21.7 to 134 mG on average.

Response: *EMF measurements in locomotives reported by the FRA surveys along the Northeast Corridor actually varied with the electrotechnology along the electrified portion, as well as with frequency and operating conditions. The in-cab locomotives maxima (average) were: 200 mG (45 mG) for the 25 Hz segment, as opposed to 90 mG (25 mG) for the 60 Hz segment. These are occupational exposure levels, which are typically factors of 10-100 times higher than public exposures. The FRA studies reported average values, maxima, minima and variability (standard deviation), as well as dynamic profiles (frequency and intensity change over time and in space).*

Since the occupational and public EMF exposure safety standards presented and compared with best data refer to eight

hours, time averaged exposure, the meaningful quantities are the statistical averages. Since it has not been established which -if any- EMF properties are hazardous to health ("dose metric"), it is unclear if average value, time -averaged intensity, duration of exposure above a certain magnetic field level at certain frequencies ("windows"), maximum value, or rate of change of the field should be measured. Therefore, the FRA made the most complete EMF measurements possible, so that safety-related inferences can be made in the future, when and if bioactive EMF characteristics are established.

CT 4-64.13

Comment: Children are drawn to look at trains, and the Stonington footbridge is an ideal place to see the trains from. The 50,000 volt wires will be 8" below the bottom of the footbridge exposing them to greater fields than any measured beside the track.

Response: *First, there are no 50 kV wires, but two 25 kV wires, carrying current that flows in opposite directions, thus providing partial EMF field cancellation. The magnetic field from a double catenary also falls off faster with distance (1/distance squared) than for a single 50 kV wire (falls off with 1/distance). Although the FRA EMF survey along the Northeast Corridor electrified and nonelectrified portions did not include overpass measurements, the TGV study did. Since the 2x25 kV catenary system proposed is modeled on the TGV configuration, data obtained in France are indicative (though at 50 Hz and harmonics). The field measured on an overpass at about 1 meter (child head level) rapidly increased to 250 mG as the train passed and drew power from that block, then fell to 10 mG within 1 minute- Again, as noted in CT 4- 64.12, it is not established which EMF property might be hazardous as "dose", nor is "dose -response" and "risk" well defined: Since trains will not pass by frequently, and will move at high speed, their contribution to a 24 hour time -averaged EMF exposure will be*

negligible, compared to TV, computers and electronic games. For comparison, consider common home EMF sources: a hair dryer used on a daily basis for a few minutes next to the head produce 700 mG, while electric pencil sharpeners and kitchen devices like microwave ovens and electric ranges produce 200 -300 mG. Headphone radio type devices next to the ear have been claimed to produce up to several gauss fields, depending on the volume.

Jason C. Becker

CT 4-65.1

Comment: We are aware that the 25,000 volt and 115,000 volt power lines intrinsic to Amtrak's plan to electrify the railroad along the entire coastal (Northeast Corridor) route will create massive electromagnetic fields.

Response: *See Response 3.5 in this volume.*

CT 4-65.2

Comment: Why not look at other alternatives since the coastline is not suited to high speed rail given the wetlands, moving bridges, crossings, footpaths, fog, hurricanes, flooding, the curvy nature of the tracks, space limits which make improvements such as rebuilding or straightening the tracks impossible, negative effect of the noise and vibration on wildlife--most notably breeding and endangered species, and the natural beauty of the coastline?

Response: *See Response 3.1 in this volume as well as response to comment CT 4-18.8.*

CT 4-65.3

Comment: What assurance can Amtrak give us that the same event--lots more high voltage wires creating electromagnetic fields--won't happen here? (You know, once the fox is in the chicken coop, it's too late!) Can we get Amtrak's assurance in writing?

Response: *See Response to Comment CT 3-14.28.*

CT 4-65.4

Comment: Can you tell us (a) the number of catenary poles to be erected, (b) the maximum speed of the trains, and (c)

how long the construction process will take?

Response: A) *The estimated number of poles is 13,000.*

B) *The maximum track speed for the high-speed trains is 150 mph and will only be between mileposts 154.5 to 171.5, 190.0 to 205.0 and 217.0 to 220.5.*

C) *The construction process is scheduled to last three years.*

CT 4-65.5

Comment: Who pays for maintenance of bridges and crossings (including vehicle bridges)? Who pays for the necessary upgrading of bridges and crossings?

Response: *Presently, the cost of maintaining bridges and crossings is borne by the facility's owner. Bridges carrying Amtrak over streams and streets are maintained by Amtrak. Crossings and bridges over Amtrak are maintained by the local jurisdiction or, if private, the owner. The cost of upgrading any bridges to accommodate this project will be borne by the project and not by the local municipalities.*

CT 4-65.6

Comment: Where will the power originate for the electricity needed to run the trains? Nuclear, coal gas, or oil? Where will the power be purchased from? Nuclear? Coal? Oil?

Response: *The base assumption for fuels used to generate electricity for the Proposed Action is 50 percent oil and 50 percent natural gas. Volume I, Section 4.6 of the FEIS/R provides a revised discussion of the projected and alternate sources of fuel for the generation of power used on the NEC.*

CT 4-65.7

Comment: Isn't it true that more oil will be used in the power plant to generate electricity than is presently used by the diesel engines (ES-6), that for the Amtrak plan to be successful in reducing pollution it

must double the number of people taking the train, and 1.8 million people must stop taking planes or using their automobiles? Won't the sparking from electric trains create the very dangerous pollutant: ozone?

Response: *Cumulatively, intercity travel consumes less energy with the Proposed Action than with the No-Build Alternative. Rail-related energy is higher than the No-Build base line which reflects a significant increase in the number and speed of trains, but this is offset by the diversion of passengers from less efficient modes to rail that will occur with the Proposed Action.*

The Proposed Action would result in fewer emissions of those pollutants covered by the three State Implementation Plans (CO, NOx and VOC) than the No-Build base line (See Tables 4.10-4 through 4.10-6).

See response to Comment CT 1-17.1 regarding ozone generation.

CT 4-65.8

Comment: We understand that there will be public inconvenience and dislocation due to the [project] such as:

Norton and Warwick: one residence and one business displaced (ES 5.2.1)

Noank: Loss of parking at public beach

Along Route: Train noise at 787 residences, 2 churches, and 2 recreation areas. Increased vibration at 1355 residences.

Near sub stations and paralleling stations: 81 residences impacted by noise.

Near bridges: Noise from construction.

Response: *The comment repeats impacts identified in the DEIS/R. Since publication of the DEIS/R, the Noank facility has been*

moved. The noise and vibration studies have been updated. See Response 3.6 in this volume.

CT 4-65.9

Comment: Isn't pollution scheduled to decrease without electrifying the railroad due to the introduction of the Federal Motor Vehicle Emissions Control Program and the state inspection and maintenance programs (ES 5.1)?

Response: *See response to comment CT 3-14.17.*

CT 4-65.10

Comment: Won't [the impact on historic resources] this have adverse effects (ES 5.2.2)?

Response: *The FEIS identifies several instances of adverse effects on historic resources. In accordance with Section 106 of the National Historic Preservation Act of 1966 as amended, the FRA has consulted with the Connecticut State Historic Preservation Officer (SHPO) on ways to mitigate these effects.*

CT 4-65.11

Comment: How do you propose to protect the thousands of people who cross the tracks at unfenced areas? Won't a lot more trains at much higher speeds (150 mph) mean more accidents? And, what about express trains whizzing through stations where there are only "locals"?

Response: *Potential increase in impacts in the area of public safety are discussed in Volume I, Section 4.8. Measures to mitigate these impacts are identified in Section 5.1.1.*

CT 4-65.12

Comment: Also, if Amtrak, for competitive reasons, needs to go from New York to Boston in 2 hours and 15 minutes, how fast will the trains go?

Response: *See Response to Comment 3-14.24.*

CT 4-65.13

Comment: Given 1.8 million more passengers, where will these people park?

Response: *See response to Comment CT 2-7.59.*

CT 4-65.14

Comment: The EIS report states "Eight sites have a moderate or high potential for contamination." What does this mean (4.13.2)?

Response: *"Eight sites have a moderate or high potential for contamination", refers to the potential for encountering hazardous materials in the soil or groundwater during construction.*

CT 4-65.15

Comment: The EIS report states: "Potential short-term indirect impacts of the proposed facilities on surface waters include siltation and sedimentation as well as runoff of contaminants. Potential long-term impacts to water resources from the Noank "paralleling station and the Richmond switching station include storm water runoff (4.12.3.5)." What does this mean?

Response: *The Noank paralleling station and Richmond Switching Station originally were located adjacent to a tidal stream and large river, respectively. Both sites have since been relocated to upland areas with reduced potential for impacts to tidal areas or streams.*

CT 4-65.16

Comment: What about commenting on all endangered species (4.12.3.3)?

Response: *See response to Comment CT 3-38.47.*

CT 4-65.17

Comment: How confident are you that this won't permanently affect the fish that swim from the sea to the river to breed and spawn? How sure are you the construction won't cause an end to the species: short-nosed sturgeon?

Response: *Based on our review of the relevant literature and consultation with Federal and state officials with responsibility for such matters, we are very confident that the project will not have a significant effect on anadromous fish including the Shortnose Sturgeon. Construction will be prohibited in these species' habitat when they are most at risk. (See FEIS/R*

CT 4-65.18

Comment: The proposed Old Lyme and State Line paralleling stations are being built on wetlands, yet the EIS study decided these sites should not be classified as wetlands. This gives the appearance of a cover-up (4.12.3.1)

Response: See response to Comment CT 3-14.35.

CT 4-65.19

Comment: What approvals does Amtrak require before it can start its 3 year construction program? Is it true that \$3.3 billion of taxpayer monies has already been spent on the Northeast Corridor Improvement Program? What will be spent over the next 3 years?

Response: *In the event that the Administrator authorizes Amtrak to move forward with construction of the electrification system, Amtrak will be required to obtain a number of Federal and state permits (see FEIS/R Volume I, Table 5.4-1).*

Since 1976, when Congress authorized that Northeast Corridor Improvement Project, some \$3.1 billion has been invested in the Washington-Boston Northeast Corridor. Over the next two decades, an additional \$2-3 billion (\$600 million over the next three years) will be required to be invested in the rail line to ensure its ability to handle the significant projected growth in intercity and commuter rail service although not all of this funding would come from Amtrak. This corridor serves some 220 million commuter and intercity passengers each year and is the most important and heavily utilized rail line in the United States.

CT 4-65.20

Comment: Will the sparking from the electric trains and wires create ozone, a major problem in our area of the country? (The City of Groton's ozone level exceeds federal standards.)

Response: See response to Comment CT 3-14.14.

CT 4-65.21

Comment: Isn't it true that freight traffic on the coastal route may have to be discontinued because of the catenary pole system? And, if freight can't use the rails, the freight railroad would be placed a competitive disadvantage? In fact, the Electrification Project could result in freight being diverted to trucks, putting a lot more heavy trucks on Routes 95 and 1. And what does EIS mean when it says some shippers may have to relocate to other areas (4.9.4.2)? And, couldn't this hurt the State of Rhode Island's plan to develop a commercial port to be served by the P&W freight railroad at Quonset Point in North Kingstown?

Response: See Response 3.3 in this volume.

CT 4-65.22

Comment: Does the EIS mean in Table 4.8-2 on page 4.27 that there will be more railroad-vehicular collisions?

Response: See response to I-14.8.

CT 4-65.23

Comment: Couldn't this state suffer a loss in jobs? And, won't the businesses at airports and along Route 95 suffer job losses if 1.8 million people stop riding on Route 95 and in airports in Boston and New York, presumably Logan and LaGuardia?

Response: *The permanent job loss number in Connecticut as a result of the proposed action is estimated to be 28. Electrification is expected to divert 324,000 persons from automobiles to rail in 2010. Even with this diversion, automobiles are predicted to be the mode of choice for 2.5 million more persons than currently (1993) levels. Therefore, the diversion from auto to rail would not result in a job loss for businesses along I-95, merely an "opportunity loss" for potential jobs and revenue. In regard to airports, while the diversion from air to rail is predicted to reduce the actual number of intercity travellers, the overall growth in air passengers is expected to ensure that the airports do not experience a net loss in passengers. (see Volume I,*

Section 4.9 of the FEIS/R for data on ridership and diversion projections and socioeconomic impacts)

CT 4-65.24

Comment: The EIS made noise level tests at a distance of 500 feet. Well, with hundreds of residences much closer, why not measure noise levels at 50 or 100 feet? Also, the decibel levels listed in the EIS are in error, we believe. Compared to the levels of 45-56 decibels shown in Table 4-4.2, the actual decibels for a residence 500 feet away is 80-100 decibels. The EIS personnel need to be more accurate. I have tested noise levels at 2 locations and decibels range well above levels considered safe for good hearing and stress.

Response: *Noise measurements for the DEIS/R were made at residences located 25 to 105 feet from the near track of the Northeast Corridor; none were made at a distance of 500 feet. It should also be noted that Table 4-4.2 of DEIS/R Volume I indicates noise impact criteria, not measurement results. Furthermore, the levels in this table refer to 24-hour measures of noise exposure, not maximum noise levels for individual trains. As indicated in Section 3.4.2.2 of DEIS/R Volume I, maximum existing train noise levels at the residential measurement sites ranged from 72 dBA to 112 dBA.*

CT 4-65.25

Comment: How loud will the substations, paralleling stations and switching stations be as measured in decibels at distances of 50 feet? 100 feet?

Response: *Because the electrical facilities include noise sources distributed over an area, noise projections are based on the distance from the center of the facility. Thus, locations that are 50 to 100 feet from the center of the facility may actually be within the facility property boundary. In any case, a worst-case prediction can be made, assuming that all noise sources are concentrated at one point. For traction power substations without noise mitigation treatment, the*

model would then predict noise levels of 65 dBA and 59 dBA at distances of 50 feet and 100 feet from this point, respectively. For paralleling and switching stations without noise mitigation treatment, the predicted noise levels would be 3 decibels lower. The actual noise levels at close-in distances will depend on the specific locations of the noise sources and observer. Measures to mitigate impacts contained in Section 5.1.1(d) would lower noise emissions to below impact levels.

CT 4-65.26

Comment: We differ with the EIS statement that "there is no established link between EMF exposure and public health effects: (4.5.3). We point to (a) the Carnegie Mellon study of EMF levels showing electric trains as the major producer of EMF for a Washington DC commuter; (b) the many occupational studies showing that people working near electric lines (like power lines) have higher incidences of illness (like leukemia); (c) the most recent Swedish study as published in the American Journal of Epidemiology showing a confirmed link between low levels of exposure to electromagnetic fields and leukemia in children; and other studies and letters from scientists of repute.

Response: *The basis of the DEIS/R statement on effects of EMF exposure on public health includes the potential commuter exposure pointed out in Part "(a)" of the comment, as well as the occupational epidemiology studies (Part "(b)" of the comment), and the recent Swedish study (Part "(c)").*

The statement (a) that the measurement for electric trains as the major producer of EMF for a Washington, D.C. commuter refers to a direct current third rail urban transit system, a different type of propulsion system than proposed as part of this system. The commenter's source of this information is in error. These measurements were performed for FRA by Electric Research and Management, Inc. (See U.S. Department of Transportation, Federal Railroad Administration, Safety of High-

Speed Ground Transportation Systems -- Magnetic and Electric Field Testing of the Washington Metropolitan Area Transit Authority Metrorail System, William L. Jacobs and Fred M. Dietrich, Electric Research and Management, June 1993. Report DOT/FRA/ORD-93/04). This is one part of FRA's extensive research into the EMF issue that is documented in the FEIS/R in Volume I, Section 4.5.1(d). This research has helped form the basis for the EMF evaluation of this project. Exposure of commuters to EMF from the train after the line is electrified is discussed in Volume III of the DEIS/R, Section 5.5.5 for on-train EMF and Section 5.5.6 for station platform EMF. Passenger exposure is summarized in Table 4.5-2 in Volume I of DEIS/R. The existing studies and research on EMF including occupational epidemiology studies, the recent Swedish study, and other scientific studies, are summarized in Volume III of the DEIS/R (Section 5.2). More detailed discussion of this scientific research can be found in the additional studies for the FEIS/R, Documentation of Occupational Studies of EMF, and Analysis of EMF Impacts on Children. Information contained in these additional studies is presented in Volume II, Sections 5.4 and 5.5 of the FEIS/R. The conclusion in the DEIS/R remains the same.

CT 4-65.27

Comment: Please note that we believe the people waiting at stations for trains and those on trains will be exposed to measurable levels of electromagnetic fields which can be dangerous. We note that the DOT's measurements are different from the EIS and we'd like to know why. The EMF level (electromagnetic field) between Boston and New Haven were 52 mG (milliGauss) and 305 mG, average and peak, respectively, this measurement differing with numbers in the EIS report.

Response: *Volume III of the DEIS, Section 5.4.1, describes that electromagnetic fields are dynamic and directly related to the magnitude of nearby electric currents. In addition, EMFs from various sources and locations can have the tendency to cancel*

each other (Section 5.6). Due to the complexity (eg., number of potential sources) under which EMFs are created and due to the rapid dissipation of EMF over short distances (field strength is a function of $1/(\text{distance})^2$), field strengths will vary significantly from location to location in the same general vicinity. Thus, differences between data sets are to be expected.

CT 4-65.28

Comment: Has an engineering survey been done recently on the safety of the various bridges over rivers between New Haven and Westerly?

Response: *See response to Comment CT 1-2.9.*

CT 4-65.29

Comment: Has an engineering feasibility study been done comparing the use of other forms of locomotion (such as gas turbine trains) to the Amtrak Electrification Plan?

Response: *See Response 3.2 in this volume.*

CT 4-65.30

Comment: Well, there are a lot more homes not listed whose view is impaired. Also, there are many homes in the to-be-created electromagnetic field. Has the EIS group considered these homes and the impact on their property values?

Response: *Volume I, Section 3.11 of the FEIS/R discusses the approximately 225 locations analyzed in the FEIS/R, 25 of which were added in response to public comment.*

CT 4-65.31

Comment: What departments are responsible for issuing approvals for the project, both Federal and State?

Response: *See response to Comment CT 4-65.19.*

CT 4-65.32

Comment: We calculate the catenary poles are 137 feet apart on average. Is this correct? (12,000 poles, 156 miles).

Response: *See response to Comment CT 3-14.16.*

CT 4-65.33

Comment: What engineering studies have been done recently regarding (a) alternative routes and (b) alternative means of locomotion (e.g. gas-turbine)?

Response: See Responses 3.1 and 3.2 in this volume.

CT 4-65.34

Comment: There should be mention of effects of hurricanes and flooding on coastal rail route since its in the flood plain only 10-12 feet above the water. Also, what about effect of bridges that get stuck open and fog in area on Amtrak's goal of 3 hours, Boston to New York City?

Response: *Amtrak is presently installing a state of the art signal system capable of safely controlling both the high speed and conventional trains. Both the existing and the replacement signal systems show stop signals before a movable bridge, when it is open. Any approaching train will receive signal indications to slow down several signals before the bridge and instructions to stop at the last signal before the bridge. These signals are in the locomotive cab and can be seen regardless of the weather.*

CT 4-65.35

Comment: How does Amtrak know the 3 hour goal is readily attainable?

Response: See response to Comment CT 4-12.3.

Marie Tyler Wiley

CT 4-66.1

Comment: The EIS reports 22 illegal pedestrian crossing locations within the 156 mile corridor. That represents only 1 illegal crossing every 7 miles- a figure highly suspect. I know that between Groton and Stonington alone there are at least 100 illegal crossings.

Response: *The FEIS/R has been revised to state that there are many illegal crossings along the NEC. The DEIS/R identified the major crossings but it is recognized that there are many more that are occasionally used. For safety reasons, Amtrak prohibits unauthorized access to the railroad right-of-way. As the right-*

of-way is private property, unauthorized access constitutes trespassing, and it is Amtrak's stated policy to aggressively enforce the trespassing statutes. Due to the safety concerns of pedestrians crossing the tracks, FRA plans to require certain areas of the right-of-way to be fenced.

CT 4-66.2

Comment: What are you going to do to ensure the safety of all when [bridges get stuck open]?

Response: See response to Comment CT 4-65.34.

CT 4-66.3

Comment: Wouldn't it make sense to build this in a less potentially hazardous area?

Response: See response to Comments CT 1-2.9, CT 4-18.8, and CT 4-60.5.

CT 4-66.4

Comment: Attracting more people will increase the potential for rail-pedestrian accidents.

Response: *Rail-pedestrian accidents are usually a result of illegal crossing of the tracks, but not by passengers. Therefore, an increase in passengers does not necessarily predict an increase in rail-pedestrian accidents.*

CT 4-66.5

Comment: Not only is this a loss to our region, but the cost of the increase in the transportation of these freight deliveries will be enormous, not to mention the fact that for one freight train full it will equate to hundreds of trucks on our highways re-air pollution and danger.

Response: See Response 3.3 in this volume.

CT 4-66.6

Comment: Won't the decrease in freight capacity of the railroad adversely affect any such plans?

Response: See Response 3.3 in this volume.

CT 4-66.7

Comment: When the EIS states in its report that the Noank paralleling station will take up the

majority of the parking lot at Groton's only public beach, it says to mitigate this problem they'll just build another parking lot.

Response: *An alternative location for the Noank paralleling station has been found. The new site is contained in Volume I, Appendix A of the FEIS/R.*

Joanne T. Baldwin

CT 4-67.1

Comment: The writer is generally opposed to the project due to environmental, health, and economic concerns.

Response: *Comment noted.*

Christina Danoff

CT 4-68.1

Comment: I would like to see an architectural design draft of [the Noank Paralleling Station at Esker Point]. I am in the process of refinancing and have lost \$10,000 in property value due to the appraiser negating my property specifically because of the "track locality" to my house.

Response: *The proposed Noank PS discussed in this comment has been relocated. A site plan of the new location can be found in Volume I, Appendix A.*

See response to Comment CT 1-9.1 on property values.

Robert Fromer

CT 4-69.1

Comment: The DEIS fails to consider certification by the State of Connecticut's Department of Environmental Protection that the project is consistent with the Federal Coastal Zone Management Act.

Response: *Before any electrification construction may begin, Amtrak must seek certification from Connecticut that electrification of the rail line is consistent with the Coastal Zone Management Act. However, it should be noted that the Connecticut Coastal Management Act exempts the existing rail corridor (and any associated improvements) from requirements pertaining to non water-*

dependant use.

CT 4-69.2

Comment: The DEIS fails to consider a determination of the project's water-dependency under federal and state coastal management statutes. A determination of non-water dependency requires the consideration of inland sites.

Response: *See response to Comment CT 4-69.1.*

CT 4-69.3

Comment: The DEIS fails to consider a determination that the project is subject to coastal site plan review by municipalities.

Response: *It was determined early on in this project in meetings with various agencies that the electrification project would be considered a federal action, and as such it is subject to Coastal Consistency Review and not local coastal site plan reviews.*

CT 4-69.4

Comment: The DEIS fails to consider a determination of consistency with the State of Connecticut's Conservation and Development Plan, Environment 2000 Plan and Transportation Improvement Program. The document fails to cite the consistent/inconsistent provisions of the programs and plans; the impact statement merely claims its consistency.

Response: *The DEIS/R reviewed the aforementioned Plans and concluded the proposed electrification project was consistent with them. Further, the State of Connecticut, having reviewed the DEIS/R, found no fault with this conclusion.*

CT 4-69.5

Comment: The DEIS fails to consider a mitigation of secondary growth impacts around express stations.

Response: *The DEIS/R and FEIS/R discuss the potential for secondary growth around express stations. (See FEIS/R Volume I, section 4.2) The conclusion of the FEIS/R is that, due to the highly developed pattern of land use in the*

vicinity of the stations, the amount of secondary development around these stations would be relatively minor. Furthermore, any induced development would not occur as a result of this Proposed Action per se, but as a result of NECIP as a whole. Mitigation of such impacts of NECIP (e.g. parking shortfalls) are more appropriate in the context of the larger program and have been included in the NECTP.

CT 4-69.6

Comment: The DEIS fails to consider a zero mitigation of all impacts and growth.

Response: *Zero mitigation is not required by NEPA or FRA regulations.*

CT 4-69.7

Comment: The DEIS fails to consider residential areas and commercial establishments as sensitive receptors in Volume III, Appendix B.

Response: *Volume III, Technical Study 1, Appendix B of the DEIS/R quantitatively presents the sensitive receptors in regard to land use. As residential property is not specifically identified (by house) on the GIS used as a basis for this analysis (Volume II of the DEIS/R), it was not quantified. However, residential areas were taken into consideration in all analyses performed and were generally regarded as being sensitive. The study did not consider commercial property a sensitive receptor for land use issues. However, in the visual analysis (Volume I, Sections 3.11 and 4.11) commercial properties were included in the realm of properties which could be impacted by the Proposed Action.*

CT 4-69.8

Comment: The DEIS fails to consider a comparison of the total energy consumption required for the electrified system and all other alternatives.

Response: *Volume I, Section 4.6.3 of the FEIS/R presents a comparison of the total BTUs for each of the reasonable alternatives and total energy consumption for all modes of intercity travel.*

CT 4-69.9

Comment: The DEIS fails to consider an accurate delineation of all wetlands.

Response: *The delineation of wetlands in the vicinity of facility sites and bridges has been revised in the FEIS/R.*

CT 4-69.10

Comment: The DEIS fails to consider a comprehensive litter control plan for all facilities which mitigates generation of solid waste through preventive measures.

Response: *Electrification is not predicted to directly create litter. However, as passengers are responsible for some of the generation of solid waste at stations, it is likely that an increase in the number of passengers will lead to an increase in solid waste (i.e., litter) generation. Amtrak currently has staff at each of the stations responsible for litter control. It is not expected that predicted increases in passengers will overtax the litter control systems in place in each of the stations.*

CT 4-69.11

Comment: The DEIS fails to consider an angularity analysis of the quantified visual impacts for each catenary poles and their cumulative visual impacts.

Response: *As the exact number and final placement of the catenary poles has not been determined, an analysis of this nature would be infeasible. Volume I, Section 4.11 of the FEIS/R provides a discussion of the cumulative change between existing conditions and the Proposed Action.*

CT 4-69.12

Comment: The DEIS fails to consider a cost and energy consumption analysis of reduced freight operations and mitigative measures.

Response: *See Response 3.3 in this volume.*

CT 4-69.13

Comment: The DEIS fails to consider a comparative profitability analysis of reduced freight operations and mitigative measures.

Response: See Response 3.3 in this volume.

CT 4-69.14

Comment: The DEIS fails to consider noise regulations for each town from New Haven, Connecticut to Boston, Massachusetts.

Response: Local noise regulations for the 36 municipalities along the Northeast Corridor were reviewed, and are summarized in Section 4.2.4 of DEIS/R Volume 3. The most stringent provisions of these regulations were incorporated in the project criteria for noise impact from the electrification facilities. Local regulation of noise from rail operations is preempted by the Noise Control Act of 1972.

CT 4-69.15

Comment: The DEIS fails to consider visual impacts of noise mitigation measures (e.g., barriers).

Response: The EIS/R recognized that noise barriers may have visual impacts but did not analyze the specific visual impact because the design of specific barriers has not been determined. Section 5.1.1(d) directs Amtrak to develop the design and siting of these barriers in consultation with adjacent landowners, local authorities and the appropriate state DOTs. It is expected that such consultation will result in site specific design treatments that will minimize the visual impact of these barriers.

CT 4-69.16

Comment: The DEIS fails to consider the locations conducive to ballast mat track-bed treatment.

Response: Volume I, Section 4.5 of the FEIS/R specifies locations where vibration mitigation may be warranted for a range of future conditions, and suggests the installation of ballast mats as a potential mitigation measure. However, the identification of locations where ballast mats will be effective requires further testing. Where such treatment is not feasible, alternate measures could be used.

CT 4-69.17

Comment: The DEIS fails to consider a comprehensive noise and vibration-abatement plan for each significantly affected receptor and generator.

Response: Volume I, Sections 4.4 and of the FEIS/R discusses noise and vibration impacts. Volume I Section 5.1.1(d) discusses appropriate mitigation.

CT 4-69.18

Comment: The DEIS fails to consider the use of passive solar energy techniques for mitigation of total energy consumption.

Response: Passive solar energy could potentially reduce energy consumption at train stations. However, since the energy consumption of train stations is not directly affected by the selection of train technologies, it was not considered in the DEIS/R, and as a result, passive solar energy was not considered relevant.

CT 4-69.19

Comment: The DEIS fails to consider the plantings of trees and naturalistic landscaping on AMTRAK and non AMTRAK properties to counteract carbon dioxide emissions.

Response: Under the Connecticut State Implementation Plan, carbon dioxide (CO₂) from transportation projects is not considered to be a pollutant with demonstrable adverse health effects. Therefore, mitigation measures to reduce CO₂ impacts (such as planting trees along the right-of-way) are not required. However, Amtrak's right-of-way is maintained in a natural state to the extent practicable and consistent with safe operating practices.

CT 4-69.20

Comment: No analysis exists for ozone generation resulting from existing and electrification alternatives.

Response: See response to Comment CT 1-17.1.

CT 4-69.21

Comment: The DEIS fails to consider a quantitative risk analysis to wildlife resulting from construction operation and maintenance

activities.

Response: *An analysis of the potential impact of the proposed project on endangered or threatened species was conducted and it was determined that the proposed project, with appropriate mitigation, would not have a significant impact on these species. For other species an assessment of wildlife habitat impacts, such as done in this EIS/R provides a better picture of the long-term impacts of a project.*

CT 4-69.22

Comment: The DEIS fails to consider a population survey of all species in affected area.

Response: *A wildlife population survey was not part of the review process, nor would it be indicative of the impact of the electrification project.*

Wildlife habitat impacts associated with the project were reviewed, including impacts resulting from electrical facilities, bridge renovations, and installation of submarine cables. This information is provided in Volume III, Technical Study 11 of the DEIS/R and Volume I, Section 4.12 of the FEIS/R. Volume III of the DEIS/R can be viewed at town libraries along the NEC.

CT 4-69.23

Comment: The DEIS fails to consider near and far-field impacts of electrification on resident and transient flora and fauna species.

Response: *The impacts to flora and fauna associated with the electrification project include construction impacts and long-term operational impacts. Construction impacts include the development of electrification facilities, installation of submarine cables, reconstruction of bridge sites and installation of catenary poles. As outlined in the DEIS/R and FEIS/R, impacts to flora and fauna are most likely to occur during construction of electrification facilities through the destruction of nesting habitat or noise impacts. Minimization of these impacts occurs through the siting process,*

minimizing measures and the proposed plantings.

The impact of increased rail traffic to wildlife species would not be expected to create an increased impact on resident or transient fauna since the existing right-of-way would only be utilized as a crossing, or perhaps nesting area, for bird species and small mammals such as ground hogs along the edges. There is no evidence to indicate the existing conditions cause stress or a high death rate on species crossing tracks. Nesting species such as Osprey and Mute Swans were observed nesting within 100 feet of the tracks or less. It would appear the wildlife community is acclimated to the rail traffic and an increase in traffic would not be expected to change the situation. Volume III can be obtained from town libraries along the NEC.

CT 4-69.24

Comment: The DEIS fails to consider short and long term maintenance/repair requirements.

Response: *See response to Comment CT 4-36-26.*

CT 4-69.25

Comment: The DEIS fails to consider other routes (e.g., monorail system over I-95 corridor, New Haven to Boston via Hartford and Springfield) for electrification as feasible and prudent mitigative measures.

Response: *Technology alternatives are discussed in Volume I, Sections 2.2.2, 2.2.3, 2.3.2, and 2.4.1 of the FEIS/R. The technology discussed in the comment, monorail, was not raised during scoping of this EIS/R and therefore not discussed in the DEIS/R. This technology would have been screened out of the DEIS/R had it been raised under screening criteria #2, technological feasibility. Monorail systems presently in operation are slow speed systems primarily used for transporting patrons of certain amusement parks. No such systems presently provide high-speed intercity service, nor is FRA aware of any such system in the advanced stages of design*

or development that would permit their application in the foreseeable future. As a consequence the characteristics of such a system are not available for analysis as part of this FEIS/R.

CT 4-69.26

Comment: The DEIS fails to assess and evaluate compliance with the policies of the Coastal Zone Management Act. The project appears to be a non water-dependent use requiring siting at other locations.

Response: See response CT 4-69.1.

Katherine H. Robinson

CT 4-70.1

Comment: I must strenuously object to the process whereby the Draft EIS for this high-speed electrification project has been prepared assuming that existing grade crossings in Eastern Connecticut will continue to exist, while at the same time the FRA is preparing a report on the elimination of the crossings being justified as necessary because of the new high speed trains, the elimination project has not been the subject of public hearings as part of this electrification DEIS.

Response: See response to Comment CT 3-14.15.

CT 4-70.2

Comment: The maps used in the EIS are in error. Specifically Sheet 9 of 29 in Vol II, fails to show extensive wetlands on both north and south sides of the track between the Wamphassuc Point Crossing and the west side of the Latimer Point crossing.

Response: *Volume II of the DEIS/R (Land Use and Regulated Areas) is not being republished as part of the FEIS/R. All inaccuracies identified in these maps are being noted on the official copy of these maps to be included in the Administrative Record maintained by FRA. The corrected maps are available for public review at the Volpe Center in Cambridge, MA or FRA's office in Washington, DC.*

CT 4-70.3

Comment: I believe that section 4(f) of 49 USC 303(c) is triggered by the public nature of the Mashantucket Land Trust ownership.

Response: *Section 4(f) of the Department of Transportation Act (49 U.S.C.303(c)) applies only when there is a proposed "use" of a protected property by a project under the jurisdiction of the Department of Transportation. Amtrak does not propose to acquire or otherwise use any of the property of the Mashantucket Land Trust. As a consequence, section 4(f) does not apply in this case.*

CT 4-70.4

Comment: With the multitude of wetlands in the vicinity, the need for an access road to maintain the station, and the possibility of underground cables, I find it hard to believe that there will be no indirect, if not direct, impacts.

Response: *Most of the access roads for these facilities are built on existing access roads, therefore, they would not present an impact to wetlands. Volume I, Section 4.12 of the FEIS/R discusses the project's potential impacts on wetlands and Section 5.1 discusses appropriate mitigation.*

CT 4-70.5

Comment: I wish also to express concern that the electrification project may result in a reduction of clearances below some of the low girder bridges that span waterways leading to coves located at the north of the railroad along the corridor (example: 2 spans in the railroad causeway at the north end of Stonington Harbor). Small marinas are frequently located in such coves, and access to them (already limited to small boats) must not be reduced further by this electrification project.

Response: See response to Comment CT 4-62.3.

CT 4-70.6

Comment: I wish to be on the record as insisting that catenary wires and other appurtenances to electrification not be

allowed to reduce already minimal height clearances under bridges and overpasses crossing the tracks.

Response: See response to Comment CT 4-62.3.

Stephen T. Brown

CT 4-71.1

Comment: I am concerned about electromagnetic radiation. Studies have proven there is impact with respect to cancer in wildlife as well as humans. Cancer is ten times higher than the normal rates in the communities surrounding Beals Air Force Base in California where the USAF installed a phased array radar in the mid 1970s.

Response: Military radars emit radio frequency radiation (RFR) at frequencies above 1 billion Hz, whose biological interaction mechanism is surface heating (similar to a microwave oven), which are different than the 60 Hz, extra-low-frequency magnetic fields. For high microwave frequencies, there are well established dose metrics and safety standards. In contrast, the health effects of 60 Hz EMF remain under active investigation and unresolved. (see Volume II, Chapter 5).

CT 4-71.2

Comment: I am also concerned about the speed in which these trains are proposed to travel and increase in train traffic will very likely increase hazards associated with accidents, derailment, road crossings, etc.

Response: Potential impacts to public safety are discussed in Volume I, Section 4.8 of the FEIS/R.

Robert Lillquist

CT 4-72.1

Comment: This writer is generally in support of the project.

Response: Comment noted.

David Greenfeld

CT 4-73.1

Comment: Why not explore the turbo-diesel technology?

Response: See Response 3.2 in this volume.

CT 4-73.2

Comment: Why not use the Hartford-Springfield Route?

Response: See Response 3.1 in this volume.

CT 4-73.3

Comment: What about quality of life issues for those homes affected by noise, vibration, electromagnetic fields?

Response: Noise and vibration impacts are discussed in Volume I, Sections 4.4 of the FEIS/R, Volume I, Section 4.9 presents an updated discussion of the EMF issue. These issues are also summarized at the beginning of this volume.

CT 4-73.4

Comment: What about adverse affects on industry and tourism (marinas, etc.) up river from bridges.

Response: The issue of the proposed project's impact on tourism and marine traffic are discussed in Volume I, Section 4.2 and Section 4.9 of the FEIS/R.

CT 4-73.5

Comment: What about safety issues from electromagnetic fields?

Response: See Response 3.5 in this volume.

CT 4-73.6

Comment: Can we have a written guarantee that voltage on these lines will never be increased or additional electrical lines added to the right of way?

Response: See response to Comment CT 3-14.28.

CT 4-73.7

Comment: Will you compensate home owners who experience a loss of property value?

Response: See response to Comment CT 3-14.7.

Jonathon Gibson

CT 4-74.1

Comment: One hurricane could destroy the NEC in several hours if electrification along the

existing (coastal) line takes place which would be extremely costly to rebuild.

Response: See response to Comment CT 4-60.5.

CT 4-74.2

Comment: The economic impact of electrification would be devastating to S.E. Connecticut. Increased frequency and speeds would mean that bridges over waters would have to be closed almost all the time. Connecticut needs and flourishes on its access to Long Island Sound.

Response: See Response 3.4 in this volume.

CT 4-74.3

Comment: I would like to see a more thorough study done on the electromagnetic fields (EMFs) and their impacts on human health, wild life, aquatic life and air wave transmission interference.

Response: See Response 3.5 in this volume.

CT 4-74.4

Comment: What do these EMFs do to our wildlife? Will fish migrate and spawn past an EMF? Could EMFs add carcinogens to our food chain via fish and livestock?

Response: Volume I, Section 4.5 of the FEIS/R presents a discussion of potential impacts of EMF on fish and wildlife. The information presented in FEIS/R is the result of a study entitled, Analysis of EMF Impacts on Fish Migration, prepared in response to public comments on the DEIS/R. This study concluded that the electrification project would have no adverse impact on wildlife or fish species at the river crossings.

CT 4-74.5

Comment: If electrification proceeds and later EMFs are found to be harmful how costly will it be to remove the EMFs?

Response: Due to low intensities of EMF that people would be exposed to as a result of the proposed electrification project and the fact that there are no studies that have found sufficient evidence to conclude that extremely low frequency (ELF) EMF

poses health risk, it is not expected that any mitigation measures would be necessary. Nonetheless, Volume III of the DEIS/R (Section 5.6) discusses the options available for mitigation of magnetic fields. The first, phase cancellation, occurs when parallel electromagnetic fields interact with each other in a manner that results in a reduction of their intensities. The current catenary and tie-line designs include line configurations which reduce magnetic fields in this manner. The second mitigation measure would involve shielding. Shielding is accomplished by the use of metal components that trap, and thus attenuate, external magnetic fields. As discussed in the DEIS/R, this option would be extremely expensive and difficult to maintain.

L'ana & John Burton

CT 4-75.1

Comment: Does it really make sense - long term OR short term to follow the jagged, curvy coastline for high speed trains???

Response: See response to Comments CT 1-2.9, CT 4-18.8, and CT 4-60.5.

CT 4-75.2

Comment: What about the submarines, which will take precedence and at times could cause the trains to stop while they pass? Or what about the environmental concerns?

Response: U.S. Coast Guard regulations govern the operation of the bridge over the Thames River at Groton (33 C.F.R 117.224). These regulations provide that the draw of the Amtrak bridge shall open immediately on signal for vessels owned by the United States Government (this includes submarines) except when a train scheduled to cross the bridge without stopping passed the Midway, Groton, or New London stations and is in motion toward the bridge. There are no plans to change these regulations and improvements contained in the NECTP, such as better signal and train control systems and replacement of the bridge should make Amtrak's compliance with the regulation easier. As a consequence, a significant impact on marine access to

the naval base is not anticipated.

CT 4-75.3

Comment: Equally important is the fact that although studies are incomplete, there is a definite correlation between carcinogens and the electric magnetic field.

Response: *See Response 3.5 in this volume.*

CT 4-75.4

Comment: Your report dismisses this but it is shown in a Swedish study that indeed the risks [from EMFs] of childhood leukemia and problems in pregnant women are there.

Response: *Please see Response 3.5 in this volume.*

CT 4-75.5

Comment: The Southeastern Connecticut coastline is more important [than the Proposed Action] to tourists, to the economy here, to those of us who live here. We ask not only for a 90 day extension on the deadline, but a real alternative look at where the FRA should be considering as a reasonable placement for an electric rail system.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994. Alternative routes are discussed in Volume I, Section 2.2 of the FEIS/R. Also see Response 3.1 in this volume.*

Theo C. Rice

CT 4-76.1

Comment: No reason has been given for the rejection of the two alternate routes, other than that they "...do not meet the criteria..." These criteria appear to have been chosen specifically to assure that no alternative can be selected other than the Shoreline route....The 'build-no build' alternative has been skewed to favor the build option; with specious logic. The electric catenary alternative has been favored over two other possibilities.

Response: *See response 3.1 in this volume.*

CT 4-76.2

Comment: Other effects of the proposed increase in service have been omitted, either by design or by ignorance, such as the effect upon commercial and recreational traffic on the rivers.

Response: *See Response 3.4 in this volume.*

CT 4-76.3

Comment: At very least, the final EIS must study two things: The alternative equipment available from U.S. suppliers, and the full analysis of electrification capital and operation costs, as well as the total capital and operating costs for the non-electrified systems suggested.

Response: *Technology alternatives are discussed in Volume I, Sections 2.2.2, 2.2.3, 2.3.2, 2.4.1 and carried forward into Chapter 4 in the context of the FF-125 and FRA-150 scenarios. At the present time, no U.S. firms are engaged in the production of high-speed rail equipment. As part of the Amtrak's high-speed equipment procurement, six teams were prequalified, of which four remain. Each of these four has substantial U.S. representation. As stated in response to comment CT 4-16.6, it is expected that a combination of Amtrak's "Buy American" requirements and North American safety and performance requirements will result in the large majority of this equipment's design and production occurring in this country.*

The capital cost of electrification is approximately \$360 million which would be avoided by a non-electrified option. Amtrak estimates that its incremental increase in operating costs over its existing non-electric operations would be \$87 million. The FF-125 non-electric high-speed scenario would consume more fuel and have a longer trip time than the Proposed Action which implies a higher operating cost, exclusive of maintenance.

Sherwin Goggin

CT 4-77.1

Comment: Amtrak has chosen an inappropriate site for this project and I feel it will fall very short of its goal, at a very dear price.

Response: *Comment noted.*

Bruce Avery
CT 4-78.1

Comment: The writer opposes the project and requests a 90-day extension to the comment period.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Joyce Olson Resnikoff
CT 4-79.1

Comment: I wish to place on record my opposition to the proposed Amtrak electrification project. It will severely impact tourism in this area due to the altering of our beautiful, pristine shoreline. Also, it will severely inhibit the access of boat traffic in and out of port.

Response: *Comment noted.*

CT 4-79.2

Comment: I request a 90 day extension of the public comment period with regard to this project.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

William M. Cannon
CT 4-80.1

Comment: This will essentially shut off all waterway traffic to the Ct. River (Middletown, Hartford, etc.), the Thames River (US Coast Guard Academy, US Naval Submarine Base, Dow Chemical, Norwich, etc.), Niantic Bay (commercial and recreational boating), Shaw's Cove (recreational boating) and the Mystic River (commercial and recreational boating).

Response: *See Response 3.4 in this volume.*

CT 4-80.2

Comment: Regarding the DEIS, I formally request that the comment period for the DEIS to be extended until the FRA (or other agency) issues the Master plan for public

review.

Response: *The Northeast Corridor Transportation Plan (NECTP, formerly called the Master Plan) addressed in a comprehensive way the planning presently underway by the different users of the NEC main line, and identified the program of improvements necessary to achieve the Boston to New York City trip time goal of three hours or less while accommodating the other NEC users. This report was issued by FRA in July 1994.*

This EIS has a much more narrow scope than the NECTP. That scope is the assessment of extension of electrification from New Haven to Boston and its alternatives not on the NECTP as a whole. FRA believes that the consideration of electrification and its alternatives did not require the benefit of comments on the NECTP. Rather that the NECTP would benefit from the draft EIS on electrification and its comments. As a consequence, the development of both final reports were coordinated.

Dana F. Avery
CT 4-81.1

Comment: I am opposed to this project because of potential danger of EMF exposure which may cause cancer.

Response: *Comment noted. See Response 3.5 in this volume.*

CT 4-81.2

Comment: I am opposed to this project because of minimal benefit saving a little travel time for a few people at tremendous economic and environmental cost.

Response: *Comment noted.*

CT 4-81.3

Comment: I am opposed to this project because of increased danger at rail crossings and rails.

Response: *Comment noted. See Response 3.8 in this volume.*

CT 4-81.4

Comment: I am opposed to this project because of high economic costs of limited and lost access to land.

Response: *Comment noted.*

CT 4-81.5

Comment: I am opposed to this project because of noise and visual pollution - train, traffic lines, catenaries.

Response: *Comment noted. See Response 3.6 and 3.7 in this volume.*

CT 4-81.6

Comment: I am opposed to this project because of damage to wetlands.

Response: *Comment noted.*

CT 4-81.7

Comment: I am opposed to this project because of loss of navigable water access by increased traffic.

Response: *Comment noted. See Response 3.4 in this volume.*

CT 4-81.8

Comment: I am opposed to this project because of loss of value to existing businesses.

Response: *Comment noted.*

CT 4-81.9

Comment: I am opposed to this project because of loss of value to properties.

Response: *Comment noted.*

CT 4-81.10

Comment: I am opposed to this project because of loss of tax base.

Response: *Comment noted.*

CT 4-81.11

Comment: I am opposed to this project because of vibration damage.

Response: *Comment noted. See Response 3.6 in this volume.*

CT 4-81.12

Comment: I am opposed to this project because of

lack of consideration for local populations which will be affected by these changes which provide very little relative benefit.

Response: *Comment noted. Also see Response to Comment CT 1-1.7*

CT 4-81.13

Comment: I am opposed to this project because of increased risk of loss of endangered species (short nose sturgeon).

Response: *Comment noted. See response to Comment CT 4-65.17.*

CT 4-81.14

Comment: I am opposed to this project because of increased disturbance to many indigenous species - damage to habitats, food sources.

Response: *Comment noted.*

CT 4-81.15

Comment: Please extend the comment period for 90 days because the report was delayed.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Arnold W. Avery

CT 4-82.1

Comment: The potential health hazards associated with electromagnetic fields emitted by the electrical lines are not yet understood and are totally unknown.

Response: *See Response 3.5 in this volume.*

CT 4-82.2

Comment: Real estate values will be adversely affected in neighboring areas.

Response: *See response to Comment CT 3-14.7.*

CT 4-82.3

Comment: Environmentalists conclude that Federal and State protected and endangered species will be adversely affected by the project.

Response: *See response to Comment CT 3-38.47.*

CT 4-82.4

Comment: Commercial and marine traffic will be affected.

Response: *See Response 3.4 in this volume.*

CT 4-82.5

Comment: For these reasons, we request that hearings be held to allow the general public to be heard on this issue.

Response: *Six public hearings were held during the public comment period on the DEIS/R. Volume I, Section ES.1 discusses these hearings.*

A. E. House, Jr.

CT 4-83.1

Comment: Restricted Bridge Openings:

A. The Connecticut River - tug and barge traffic will be curtailed resulting in a disruption of fuel oil and other raw material shipments to Hartford and other towns along the Connecticut River. Commercial and recreational boaters will also be restricted, resulting in financial losses to marinas north of the railroad bridge.

B. The Niantic River - marinas, commercial party fishing boats, sport-fishing charter boats and recreational boaters will all be adversely affected.

C. The Thames River - The U.S. Naval Submarine Base will be affected, possibly resulting in the loss of the Base to this area and in several thousands of jobs lost. If the submarine have priority over the trains, which I am sure they do, then what is the point in having a high speed train on this corridor to save 40 minutes on travel time when the trains will have to be held up for the subs, causing a complete disruption of Amtrak's schedules? This is not addressed in the DEIS and I wonder if your researchers were in contact with the Navy about this matter.

D. The Mystic River - Access to the

Mystic Seaport (1300 boats visit the Seaport annually) will be restricted as will cruises of its Steamboat Sabino. The four schooners that dock north of the railway that take tourist on day cruises would be forced to move out of Mystic. In addition, marinas and recreational boaters would also be adversely affected.

Response: *See Response 3.4 in this volume and Comment CT 4-75.2.*

CT 4-83.2

Comment: Real Estate Values: Property values will decline due to adverse visual, noise, and vibration impacts and the real or perceived threat of EMF exposure. People will sue for low tax assessments resulting in a loss of substantial tax revenues to the towns along the corridor.

Response: *See response to Comment CT 3-14.8.*

CT 4-83.3

Comment: Electrification will result in loss of freight service.

Response: *See Response 3.3 in this volume.*

CT 4-83.4

Comment: If electrification should proceed, an alternate site must be located for [the Noank Paralleling Station at Esker Point Beach].

Response: *An alternative location has been found and the Proposed Action has been revised to include this location. Volume I, Appendix A of the FEIS/R presents the revised proposal.*

CT 4-83.5

Comment: Since the DEIS was delivered to the public late I strongly request that a 90 day extension of the Comment Period be granted.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

David C. Bentley

CT 4-84.1

Comment: My primary objection is in the overall safety of all bridges over rivers, estuaries and roads and the eventual requirement to replace those bridges.

Response: See response to Comment CT 1-2.9.

CT 4-84.2

Comment: A second objection I have relates to the overall cost to the taxpayers in these economic times.

Response: Comment noted.

CT 4-84.3

Comment: Thirdly, I question whether the time "savings" of the high speed trains will actually be realized.

Response: See response to Comment CT 3-14.37.

CT 4-84.4

Comment: A fourth concern is the impact the project will have on our fragile coastal wetlands.

Response: The FEIS/R concluded that the proposed project would have no direct impact on wetlands except at the Leetes Island paralleling station where the access road could cross the edge of a wetland. Indirect impacts will be minimized through the use of best management practices.

CT 4-84.5

Comment: I urge you to extend this period for 90 days in order to allow the public adequate time to respond to this project which will have a lasting impact upon the whole coastline of the State of Connecticut.

Response: In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.

Richard G. Wiben, Jr.

CT 4-85.1

Comment: I formally request an extension of 90 days for the Public Comment Period with respect to the EIS Report.

Response: In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.

John E. King

CT 4-86.1

Comment: Reference 26 [DEIS/R Vol III p. 5-4] is of particular interest. Please provide a copy or a convenient opportunity to review your copy.

Response: Copies of all supporting material to the DEIS/R is available for public review at the Volpe National Transportation Systems Center. The point of contact is Glenn Goulet. His telephone number is (617) 494-2002.

CT 4-86.2

Comment: Describe the most likely propulsion system under consideration for the electric locomotives.

Response: The propulsion system on the High Speed Trainset and electric locomotives will contain three primary elements. The main transformer, which receives power from the overhead catenary, the inverter units, which will provide control for the power, and the polyphase asynchronous induction traction motors assemblies, that will apply the power at the wheels.

CT 4-86.3

Comment: Provide copies of or convenient local access to all the raw EMF data.

Response: See response to Comment CT 4-86.1.

CT 4-86.4

Comment: Provide the computer model used to develop a profile of electromagnetic field (EMF) intensities versus distance from transmission lines, in particular, exposure zones 1,2, and 3.

Response: See response to Comment CT 4-87.6.

CT 4-86.5

Comment: Provide estimated exposure level of a passenger located in the AEM7 coach and sitting in the area where a maximum intensity of 204mG has been measured.

Response: *The maximum measured intensity of 204 mG on the AEM7 represents a short-term magnetic field strength which passengers could potentially be exposed to (DEIS/R, Volume III, Section 5.5.5). Field strengths on the order of 204 mG would typically occur during maximum current flows associated with the train acceleration; however, external sources (e.g., existing transmission lines, adjacent industry, etc) along the railroad right-of-way may also contribute to recorded peaks in magnetic fields. It is important to realize that these magnetic field levels are typically short in duration and do not represent exposure levels throughout one's ride on the train. The brevity of such peak magnetic field levels can be seen in Figure 5-5 of the DEIS/R, Volume III. This figure shows magnetic field levels versus time for a section of track in Mamaroneck, New York which is currently electrified.*

The more appropriate value to estimate the exposure of a passenger over the duration of the trip (currently about 2 hours 30 minutes from Boston to New Haven) is the average magnetic field strength. The average field strength is significantly less than peak levels since there are periods of time when the train will be coasting, breaking, or idle at stations and minimum electrical current is being drawn. The average measured magnetic field for the AEM7 is approximately 26 mG.

It needs to be emphasized that the maximum recorded magnetic field intensity of 204 mG in the AEM7 is approximately one-tenth of the lowest applicable interim guideline for magnetic field exposures (DEIS/R, Volume III, Section 5.3).

CT 4-86.6

Comment: Describe long-term plans for monitoring radiated EMF levels and noise levels along the Northeast Corridor after the electrification project is completed.

Response: *Volume I, Section 5.1.1(e) of the FEIS/R provides that Amtrak, in cooperation with FRA and in consultation with*

interested state and local environmental, health, and transportation agencies will establish a program to monitor EMF at sensitive receptors adjacent to the catenary system and electric facilities developed as a part of this project. It is expected that the data collected during this program would be periodically published and become generally available to the scientific community through the National Technical Information Service.

Robert P. Walton

CT 4-87.1

Comment: Page 5-1, Section 5.1, 2nd paragraph. The 2nd from last sentence states: "E-field shielding is expected to be provided by metallic train construction, buildings, and trees." The DEIS does not provide any background data, empirical measurements, or cite any references to justify this assumption.

Response: *Electric field shielding by items such as those discussed in Volume III of DEIS/R (Section 5.1) is a well known and thoroughly documented physical characteristic of electric fields. In addition to the numerous text books which cover this subject, the following references provide a good source of information on electric field shielding:*

World Health Organization (WHO), Environmental Criteria 35: Extremely Low Frequency (ELF) Fields, World Health Organization, Geneva, 1984.

Electric Power Research Institute, Transmission Line Reference Book: 345 kv and Above, California: Electric Power Research Institute, 1982.

"Magnetic and Electric Field Testing of the Amtrak Northeast Corridor and New Jersey Transit/North Jersey Coast Line Rail Systems," Federal Railroad Administration, April 1993.

CT 4-87.2

Comment: Page 5-3, Section 5.2.1. The last sentence states: "Magnetic fields with frequencies outside the 50-60 Hz range are expected to be generated by electric

trains and their power systems." The remainder of the DEIS seems to analyze only the impact of magnetic fields at frequencies of 50-60 Hz. It is recommended that additional data pertaining to the anticipated electromagnetic fields with frequency components outside the 50-60 Hz range be provided and analyzed. Alternatively, clear justification should be provided as to why only 50-60 Hz frequency range is considered relevant in the DEIS. If there is any data available, I request that it be furnished to me for further analysis.

Response: *The proposed NEC electrification project will be a 60 Hz power system. This system will create a magnetic field with a similar frequency (60 Hz) along with limited intensities of harmonics (typically the third and fifth harmonic) above 60 Hz. As discussed below, the EMF frequency associated with the power frequency (60 Hz) dominates the overall EMF readings, and in practice there is little difference between 60 Hz and broadband measurements. Therefore, only the EMFs in the 60 Hz band have been included in the EIS/R.*

The narrow band nature of EMF frequencies are evident in data collected with the multi-frequency analyzers, used during portions of the field studies in New York and New Jersey reported in the DEIS/R. During field testing performed by Electric Research and Management, Inc. (ERM), EMF readings for multiple frequencies were collected at three station platform; New Rochelle, N.Y., Red Bank, N.J., and Princeton Junction (25 Hz), N.J. While the New Rochelle readings are more representative of the NEC electrification since both Red Bank and Princeton Junction are single feed catenaries, the results of the testing (Table CT4-87.2) clearly show the dominance of the EMF frequency in the equivalent power frequency. Similar results are obtained from the 25 Hz Princeton Junction measurements in which the average field intensities for the 25 Hz range are essentially equal to the average field intensities for the broadband measurements (0 to 2,560

Hz).

Table CT4-87.2 New Rochelle, NY and Red Bank NJ Platform Measurements (ERM)

Frequency Band	New Rochelle (mG)		Red Bank (mG)	
	Avg.	Max.	Avg.	Max.
50-60 Hz	29.90	203.59	13.67	104.72
5-2560 Hz All Freq.	31.12	208.79	14.42	106.59

Note: Values are averages of multiple recordings

CT 4-87.3

Comment: Page 5-17, Section 5.4.3. This section describes measurements recorded in Providence, Rhode Island, by Electric Research and Management Inc. (ERM). The DEIS does not specify what frequency band in which the measured levels were obtained. The DEIS should clarify how this data was obtained. If possible, please furnish a copy of the report cited as reference 40 in the bibliography of this section.

Response: *Data obtained in Providence, Rhode Island, by ERM was collected with a Model MFB2D2 manufactured by ERM. This meter uses omni-directional (3 axis) antennas and acquired 60 Hz (40 to 90 Hz) magnetic field amplitude data. The data presented in the DEIS is based on the route-mean-square of the three axial components of the magnetic field.*

Due to the quantity of raw data associated with this study, it is not possible to forward copies to individuals for review. If individuals would like to review the raw data, appropriate arrangements can be made through Glenn Goulet at the Volpe Center, (617) 494-2002. We would like to point out, however, that although the DEIS/R text cited reference 40 on this issue, a typographic error occurred and the correct reference is number 31.

CT 4-87.4

Comment: Page 5-18, Section 5.4.3. the section also discusses data obtained during a drive from New York to Boston along a route approximating the NEC. It is not

clear whether these measured levels were obtained in a narrow band near 60 Hz or as broad band data.

Response: *Background data obtained during the drive from New York to Boston along a route approximating the NEC was collected with a EMDEX Model II manufactured by Enertech Consultants. The EMDEX Model II is a three-axis magnetic data logger which acquires broadband (40 to 800 Hz) magnetic field amplitude data. The data presented in the DEIS represents the route-mean-square of the three axial components of the broadband field.*

Because the 60 Hz frequency dominates the magnetic field strength associated with 60 Hz electrical sources (Section 5.5.2), background data collected during the N.Y.C. to Boston drive corresponds very closely to the narrower band measurements (40 to 90 Hz) collected during the Providence, RI drive, performed by ERM (Section 5.4.3). Based on the data collected, it is concluded that the EMF levels presented in the DEIS are representative of background levels at the frequency of the proposed power source (60 Hz) and do not overestimate background level by presenting broadband measurements.

CT 4-87.5

Comment: Vol III, p. 5-9, Section 5.3.3.2. It is unclear whether the limit is 0.5 Mg or 5 Gauss. Please clarify.

Response: *Clarification of the field strength is required due to a typographical error. The required labeling guideline is for magnetic resonance devices that might possibly expose persons with cardiac pacemakers or other implanted electronic devices to static or alternating magnetic fields exceeding 5,000 milliGauss (5 Gauss).*

CT 4-87.6

Comment: Page 5-21, Section 5.5.1. This section discusses modeled data provided by ERM representing the expected EMF levels resulting from the 115 kilovolt utility tie-lines supplying electrical power

to the substations. The equations, assumptions, or calculations used to model/compute these estimated EMF levels are not provided in the DEIS. This information should be provided to enable independent validation of the modeled data. I request that this information be forwarded to enable further evaluation.

Response: *The assumption used to model the 115 kv utility tie-line are presented in Volume III of the DEIS, Section 5.5.1. The program used by ERM is called "MF3D". ERM states that "The MF3D program can model any conductor that is a line, catenary, or arc by automatically approximating it with a series of straight line segments. Cylindrical surfaces are modeled as circular arrangements of straight conductors running parallel to the axis of the cylinder. The MF3D program calculates the magnetic flux density produced at requested output points by each current-bearing segment according to the Biot-Savart Law. It then vectorially adds the magnetic flux density contributions from all the current-bearing segments at each output point." Because this program is commercially marketed by ERM, copies cannot be furnished.*

CT 4-87.7

Comment: Additionally, it is unclear whether the electric motors/controllers to be used at the proposed higher operating voltage will operate exclusively at 60 Hz, on rectified DC power, or whether electronically-controlled designs will be employed in the end product. Electronically-controlled designs are capable of generating harmonic currents at frequencies and magnetic fields outside the 50-60 Hz range. It is not possible to determine what limits Amtrak will impose upon the specification for any new locomotives/coaches obtained for use in the NEC if the electrification is completed as planned. The DEIS should provide clearer definition of the required configuration and pertinent operating specifications for the trains. Please provide this information to me if available.

Response: *The electrification design will provide filters to control harmonic generation within the industry proscribed standards.*

CT 4-87.8

Comment: The section also does not indicate whether the measurements were obtained using test instruments with omnidirectional or unidirectional response patterns. If unidirectional measurements were obtained, the DEIS should specify whether readings were taken with multiple mutually-perpendicular antenna orientations and whether the readings presented in the DEIS represent the maximum level obtained. The DEIS should provide additional details in this area to enable more complete analysis of the data presented. If possible, please forward the measured data along with the procedures used to operate the test equipment and obtain the data.

Response: *The EMF field equipment used for the DEIS field investigations included: three Hewlett Packard (HP) Model 3561A Dynamic Signal Analyzers, one Combinova Model MFM 10, and one Emdex Model II. While both the handheld Combinova and Emdex Model II are omni-directional, the HP Model 3561A are unidirectional. Measurements with the HP Dynamic Signal Analyzers outside the train were taken with the axis of the circular antenna perpendicular with the tracks (i.e., the loop of the antenna was parallel to the tracks) and measurements inside the train were taken with the antenna axis parallel with the tracks. The HP recorders were used to assess the drop off of EMF with distance from the rail, since they incorporated three antennas, recording simultaneously, at three separate distances from railyard. Moreover, the HP recorders provided multi-frequency measurements. These data were included with other available multi-dimensional data to project EMF field strength as a function of distance from the railyard.*

During the field study three types of measurements were collected, depending on the equipment used. These types of measurements included continuous full

spectrum measurements, continuous broadband or narrow band measurements, and peak-hold measurements. While the first two measurement types require a manual review of the data to obtain maximum (or average) levels, the latter measurement provides the maximum field strength over the recording period. Volume III of the DEIS (Sections 3.4 and 3.5) summarizes the data collected and indicates whether the data presented represents a maximum value, an average value, or a range (minimum-maximum) of values.

Due to the quantity of raw data, it is not possible to forward copies to individuals for review. If individuals would like to review the raw data, appropriate arrangements can be made.

CT 4-87.9

Comment: Amtrak should develop and publish their plans for continuous monitoring of electromagnetic fields produced by their equipment along the NEC and comparing this data to the evolving recommendations from future studies. Amtrak could also make this data available to enhance the current database of information concerning EMF exposure.

Response: *See response to Comment CT 4-86.6*

Margaret Oliver

CT 4-88.1

Comment: I am concerned about the proposed electrification because of the adverse health risks created by EMFs, not only to citizens living near the 157 miles of track but to fish and wildlife as well as the train passengers themselves.

Response: *Comment noted. The question of health risks to people, including train passengers, is addressed in response to other comments, for example, CT 4-65.26, CT 3-40.7, CT 1-9.6, MC 4-8.9, MC 4-8.12. The question of possible health risks to fish is addressed in additional study submitted with the FEIS/R Analysis of EMF Effects on Fish, and in response to comments CT 2-5.1, CT 2-5.2, CT 2-5.3. Information*

contained in the additional study of fish is presented in Volume II, Section 5.3 of the FEIS/R.

CT 4-88.2

Comment: I am concerned about the proposed electrification because of the adverse environmental impact including damage to wetlands, EMFs, noise pollution and creating a visual eyesore.

Response: *Comment noted. Noise impacts and appropriate mitigation, an updated discussion of EMF, and impacts on wetlands and appropriate mitigation and impacts on visual resources are addressed in Volume I, Chapter 4 of the FEIS/R.*

CT 4-88.3

Comment: I am concerned about the proposed electrification because of the inappropriate location for high speed trains.

Response: *Comment noted.*

CT 4-88.4

Comment: I am concerned about the proposed electrification because of the adverse economic impact. Loss of property value to residents and businesses. Interference with freight service. Interference with commercial and recreational marine traffic.

Response: *Comment noted. See Volume I, Section 4.2 and Responses 3.3 and 3.4 in this volume.*

Karen Anderson

CT 4-89.1

Comment: The writer opposes the project and requests that it be stopped.

Response: *Comment noted.*

Nancy H. Warburton

CT 4-90.1

Comment: I am concerned about the expected three-fold increase in train traffic that will virtually destroy "readily accessible" boat travel through railroad bridges.

Response: *Comment noted. See Response 3.4 in*

this volume.

CT 4-90.2

Comment: I am concerned about the effects of high voltage electromagnetic fields on humans, animals, fish and plant life.

Response: *See response to Comment CT 4-88.1.*

CT 4-90.3

Comment: Development of mass transportation is desirable, but [not] at the stake of lowering shoreline property values.

Response: *Comment noted.*

CT 4-90.4

Comment: Development of mass transportation is desirable, but [not if you] dangerously increase train travel speeds on roadbeds and many bridges built over 100 years ago.

Response: *Comment noted. See response to Comment CT 1-2.9.*

CT 4-90.5

Comment: It is obvious that all the alternatives have not been properly reviewed and more time and energy is needed to explore this proposed project.

Response: *Comment noted.*

Marcia W. Porter

CT 4-91.1

Comment: The writer opposes the project due to environmental and economic concerns.

Response: *Comment noted.*

George & Paula Marcus

CT 4-92.1

Comment: 90% of the automobile-based pollution in this area is caused by local commuter traffic not people travelling the eastern corridor. Amtrak's plans will not change that.

Response: *Tables 4.10-4 thru 4.10-6 in Volume I of the FEIS/R compare transportation-related air pollutant emissions by source for the Proposed Action and No-Build Alternative scenarios.*

CT 4-92.2

Comment: The excavation required for the power poles will add to the shoreline erosion in many areas.

Response: *Section 5.1.1(l) identifies the measures incorporated into the project to minimize impacts from the limited amount of excavation required as part of this project.*

CT 4-92.3

Comment: Will Amtrak make up for the loss in aesthetic value and in our quality of life?

Response: *It is expected that most of the potential impacts caused by the proposed action would be mitigated by the measures described in Volume I, Section 5.1 of the FEIS/R.*

CT 4-92.4

Comment: What about the resulting permanent loss to our tax revenues?

Response: *The issue of the proposed project's impacts on real estate values and municipal tax base are discussed in Volume I, Section 4.2 of the FEIS/R.*

CT 4-92.5

Comment: The vibrations from train traffic are already harmful to our unique stock of 18th and 19th century houses. In time, doubling the amount of traffic will literally shake these houses apart.

Response: *See Response 3.6 in this volume.*

CT 4-92.6

Comment: It will repay Amtrak and the country to put the money aside until we have enough to build a direct inland route (NY, New Haven, Hartford, Boston) with the very latest in over the ground technology.

Response: *Comment noted.*

Linda Vogel

CT 4-93.1

Comment: To electrify this same meandering tidal rail path at the end of the 20th century will repeat the errors of the past, and will cause further, massive damage to

the coastal wetlands of this area, especially that between New Haven, Connecticut and Westerly, Rhode Island.

Response: *Comment noted.*

CT 4-93.2

Comment: The FRA should consider construction of a totally new, technologically current rail bed between Boston and New Haven that would link Boston, Worcester, Hartford, and possible New London via an extra track running due North from the New London Depot to Hartford.

Response: *Section 2.2.4 in Volume I of the FEIS/R discusses the alternative routes evaluated in this analysis. This route, while not specifically considered, would have many of the same attributes of the Inland Route and the Airline Route. Developing this route would cost more, take longer and have greater environmental impacts than the Proposed Action..*

CT 4-93.3

Comment: Cancel the rail electrification project altogether and concentrate on aerospace research.

Response: *Comment noted.*

Sydney & Roger Gross

CT 4-94.1

Comment: There are no demonstrable benefits to Southeastern Connecticut and almost surely environmental damage will follow in this fragile coastal setting.

Response: *See response to Comment CT 1-1.7.*

CT 4-94.2

Comment: Alternatives to this place have not been proposed nor carefully considered.

Response: *See response to Comment CT 1-1.6.*

Linda Reynolds

CT 4-95.1

Comment: I'd like to know how the study could have said that only 200 views (which the study later knocked down to 51 views based on some abstract calculation) would be impacted? That is absolutely

not true!

Response: *Volume I, Table 3.11-1 of the FEIS/R provides a revised list of VSRs.*

Melissa Hyland

CT 4-96.1

Comment: Amtrak is considering a high speed rail system from New York to Boston. We have read the draft EIS and feel that all the environmental, safety and economic features have not been adequately addressed and Amtrak does not commit itself to any action to mitigate the adverse impacts.

Response: *Comment noted.*

CT 4-96.2

Comment: The taking of public lands near town beaches for power stations should be questioned much more thoroughly. At pages 4-2 and 4-3, the Esker Point problem is mentioned without any commitment to do anything.

Response: *An alternative location for the Noank paralleling station has been found. Volume I, Appendix A displays the new site and Volume II, Chapter 1 discusses the proposed location of the site.*

CT 4-96.3

Comment: An inland route which aid business in Hartford and Springfield, or a route along I-95 should be more thoroughly considered.

Response: *See Response 3.1 in this volume.*

CT 4-96.4

Comment: Accordingly, we are asking for more time to comment and for additional hearings.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Regina Covin

CT 4-97.1

Comment: Noise can cause hearing damage; noise becomes hazardous when it is 85-90 decibels or more.

Response: *See Response 3.6 in this volume.*

CT 4-97.2

Comment: Crossing closures: lose public access and affects businesses; businesses must close.

Response: *See response to Comment 1-2.6.*

CT 4-97.3

Comment: Alternative routes need to be given due consideration:

A. The former Airline Route through Springfield

B. New Haven-Hartford-Boston route

C. Construct a line near Route 95.

Response: *See Response 3.1 in this volume.*

CT 4-97.4

Comment: Have alternative types of trains been explored in detail that may be quieter, safer while eliminating unsightly poles, wires, etc.?

Response: *See response 3.2 in this volume.*

CT 4-97.5

Comment: I am concerned about lower property values.

Response: *See response to Comment CT 3-14.7.*

CT 4-97.6

Comment: Boaters will be affected by the action of removable bridges, i.e., having to wait frequently for bridges to close to allow the trains to pass.

Response: *See Response 3.4 in this volume.*

CT 4-97.7

Comment: Is there enough evidence to say that EMF is safe? That it will not cause health problems?

Response: *See Response 3.5 in this volume.*

CT 4-97.8

Comment: When hurricanes and other such storms hit, wouldn't there be more destruction along the coast with the added factor of the water?

Response: *Natural resources associated with the rail line would not be expected to be altered. The New London, Leetes Island and Stonington facilities will be flood-proofed to minimize potential impact to the facilities.*

Tana Raikes/John George

CT 4-98.1

Comment: Tourism and water access are the economic mainstay of southeastern Connecticut and can only be harmed by the further restrictions on coastal access imposed by this plan. The visual pollution, of course, is an added detriment. If no other route could be used at least Amtrak should use trains like the high-speed European trains which do not need overhead wires.

Response: *Impact of the Proposed Action on tourism and water access are discussed in Volume I, Section 4.2 of the FEIS/R. With regard to the reference to European trains, all modern high-speed trains are electric and operate under catenary similar to that proposed for this project. In fact, this system is modelled after that used by the French TGV.*

CT 4-98.2

Comment: You should also consider the ways in which this plan might add to the problem of air pollution. By preventing freight from moving by rail on the new electrified system, it will add many trucks to I-95. It will also require additional power station(s) to generate the needed electricity and will add ozone to the air. None of this helps reduce air pollution levels and could make them worse.

Response: *Analysis of the air pollutant emissions that would result from the Proposed Action and the No-Build Alternative scenarios is presented in Volume I, Section 4.10 of the FEIS/R.*

CT 4-98.3

Comment: The danger of exposing families along the shoreline, passengers and railroad staff to great increases in electromagnetic radiation should not be underestimated.

Response: *See Response 3.5 in this volume.*

CT 4-98.4

Comment: Why should individual homeowners, businesses, and communities in Connecticut suffer health risks and economic hardships for a plan which offers no compensating benefit to them?

Response: *See response to Comment CT 1-1.7.*

Shirley Chacho

CT 4-99.1

Comment: I am concerned about the value of my condo unit.

Response: *See response to Comment 3-14.7.*

CT 4-99.2

Comment: Our condo is on the wetlands and I am concerned about the impact on the birds and the animals that live and nest there.

Response: *Potential impacts on wetlands and appropriate mitigation are addressed in Volume I, Sections 4.12 and 5.1 of the FEIS/R.*

Ernest Whitman

CT 4-100.1

Comment: This is not the best or more direct route from New York to Boston.

Response: *See Response 3.1 in this volume.*

CT 4-100.2

Comment: Will Amtrak hire me if the marina closes due to inaccessibility caused by Amtrak's increased schedule?

Response: *Volume I, Section 4.2 of the FEIS/R presents estimates of the employment created by the Proposed Action. Amtrak is a private corporation with its own hiring policies. If you wish further information, contact:*

*David Carol
Amtrak
Saybrook Junction Marketplace
455 Boston Post Road
Old Saybrook, CT 06475
(203) 395-3004*

CT 4-100.3

Comment: What about the high voltage electromagnetic waves? Cancer is increasing in this country and electromagnetic waves could possibly be one of the causes. This possibility is under study and is not yet complete.

Response: See Response 3.5 in this volume.

John Brooks

CT 4-101.1

Comment: When the DEIS/R discusses the option of retaining diesel service from New Haven to Boston, there is no mention of any studies or attempt to reduce the amount of time required for the engine change. Will through traffic from Springfield continue south of New Haven? This requires time to connect/disconnect also. I would think that a study of how to reduce this time (or proving that it is not cost effective) should be included in the study.

Response: *Amtrak's crews have been changing engines at New Haven for many years and the time required for this operation has been minimized. Once the Shoreline has been electrified, there will be no need for engine changes at New Haven, since all Amtrak trains between New York and Boston will be electrified. Passengers traveling to/from Springfield, MA will transfer at New Haven. Therefore, the engine change time will be saved and the trip time shortened.*

CT 4-101.2

Comment: What is the accepted level of noise? Has the noise been recorded at the School Street crossing in West Mystic? Is it now "acceptable"?

Response: *Because people's response to noise is subjective, depending on non-acoustical as well as acoustical factors, there is no single "accepted level of noise." However, various Federal agencies have developed guidelines for acceptability in terms of the noise exposure over a 24-hour period, described by the day-night equivalent sound level (L_{dn}). In particular, the U.S. Department of Housing and Urban Development (HUD)*

has established guidelines for acceptable noise environments at sites of housing they fund. HUD classifies areas with L_{dn} of 65 dBA or less as "acceptable," areas with L_{dn} above 65 dBA but not above 75 dBA as "normally unacceptable," and areas with L_{dn} above 75 dBA as "unacceptable." Train noise measurements were made at a home in the vicinity of the School Street crossing in West Mystic, located about 35 feet from the near track centerline. Although 24-hour data were not obtained at this site, designated as A-3a in the DEIS/R, the existing L_{dn} at this location was projected to be 75 dBA. This existing level would be considered to be "normally unacceptable" according to the HUD standards.

CT 4-101.3

Comment: The study makes no mention of restricting drawbridge openings over navigable waters. If over 50 trains are run daily, this issue will have a significant impact on vessel traffic (both commercial and recreational) on the Connecticut, Thames and Mystic Rivers.

Response: See Response 3.4 in this volume.

CT 4-101.4

Comment: These communities gain the least, and lose the most from the proposed project. A special portion of the final study should address the impact of the entire project on the character of this region of the Northeast Corridor.

Response: See response to Comment 1-1.7.

Stephen B. Spear

CT 4-102.1

Comment: A ninety-minute reduction in travel time from Boston to New York will not attract new customers away from air travel.

Response: See response to Comment CT 3-14.25.

CT 4-102.2

Comment: More and faster trains on the track that I live near will significantly disrupt the quality of life and environment for those of us that live here.

Response: *Comment noted.*

Audrey Golub

CT 4-103.1

Comment: In the name of progress, Amtrak will ruin the coastline of Connecticut and destroy for those of us who care about the environment and what little of what's left in southeast Connecticut.

Response: *Comment noted.*

Richard S. Eatin

CT 4-104.1

Comment: Please require the applicant [Amtrak] to utilize more advanced (quieter and safer) technology already in use in Europe.

Response: *Such a requirement is included with regard to noise and vibration of Amtrak's new high-speed trains. (See Section 5.1.1(d).) FRA's extensive research into the safety aspects of existing high-speed rail systems will also be reflected in this equipment. Trainsets to be acquired by Amtrak for use on the NEC would generally be quieter than the trainsets used in analysis contained in the DEIS/R.*

Robert Fromer

CT 4-105.1

Comment: The public hearing was inadequate and insufficient in that the public was prohibited from direct examination and cross examination of the preparers, consultants and contributors to the DEIS/R

Response: *The format of the public hearing was consistent with the normal EIS practice.*

CT 4-105.2

Comment: No data, analysis, assessment and evaluation appears in the DEIS/R relative to the structural conditions of all railroad bridges and the projected economic and environmental impacts of their repairs and replacements.

Response: *See response to Comment CT 1-2.9.*

CT 4-105.3

Comment: The electrification project will not

significantly reduce air pollution emissions in the Northeast by the year 2010.

Response: *The air quality benefits of the Proposed Action are presented in Volume I, Section 4.10 of the FEIS/R. FRA believes that these benefits are significant.*

Unknown

CT 4-106.1

Comment: I believe that our shoreline communities will suffer if this change occurs.

Response: *Comment noted.*

CT 4-106.2

Comment: Many factors concern me, primarily the unknown potential hazards associated with electromagnetic fields.

Response: *See Response 3.5 in this volume.*

Tracy H. Smith

CT 4-107.1

Comment: The writer supports the project.

Response: *Comment noted.*

Patrick Crowley

CT 4-108.1

Comment: For all of the money and planning that is going into this project I feel Amtrak should purchase all of the homes that would fall into this 150 foot zone.

Response: *It is the general finding of this study that if the Proposed Action's effects on sensitive views and noise levels cannot be mitigated, and if public perceptions regarding EMF's remain unchanged, there could be a small effect on property values. As Amtrak is a private corporation, it may be liable for impacts to property values that can be proven in court.*

CT 4-108.2

Comment: Why not move the tracks in the New London area away from the shoreline and put them near I-95?

Response: *Volume I, Section 2.2.4(b) of the FEIS/R provides a discussion of rerouting the*

NEC main line to the vicinity of I-95 between Old Saybrook, CT., and East Greenwich, RI.

CT 4-108.3

Comment: I feel installation of this cable through waterways which are public property are a hazard to navigation.

Response: *The cable will be buried 7 feet below the bottom of the channel at the moveable bridges and, therefore, its presence will not affect navigation.*

CT 4-108.4

Comment: I feel installation of this cable through waterways which are public property are a hazard to wildlife.

Response: *See response to Comment CT 4-108.3.*

Dora Hill

CT 4-109.1

Comment: Regarding the Palmer Street crossing in Pawcatuck, [the section of the draft report for elimination of grade crossings] states: "There are no structures of importance in the immediate vicinity of the existing rail crossing, or the proposed new overpass (should read underpass) crossing." On the contrary, this area is designated as the Mechanic Street Historic District of the Town of Stonington and was accepted for inclusion on the National Register of Historic Places on June 7, 1988.

Response: *The FEIS/R for electrification correctly identified this historic district. This comment is in reference to a separate study by the FRA. Therefore, it is not within the scope of this FEIS/R.*

Henry P. Bakewell

CT 4-110.1

Comment: Amtrak must provide adequate opportunity to continue viable local freight service between Providence and New Haven by the Providence and Worcester RR.

Response: *See Response 3.3 in this volume.*

Beatrice E. Minson

CT 4-111.1

Comment: Where is the logical analysis which balances costs against benefits?

Response: *The purpose of the FEIS/R, as defined by NEPA, is to present a logical analysis of the potential impacts and benefits of the proposed action. This is accomplished by comparing the preferred alternative (in this case electrification) with reasonable alternatives (including at least a no-build alternative). This information is reviewed by cooperating agencies and the public (during the comment period) and is revised based on those comments. The final report (FEIS/R) is then sent to the agency decision-maker (in this case the Administrator of FRA) for a decision. That decision, presented in the formal Record of Decision (ROD), is based on the costs (impacts) and benefits presented in the FEIS/R.*

CT 4-111.2

Comment: This shoreline location is doomed to be replaced with an inland path that will produce greater speeds with less public disruption.

Response: *Because of direct service provided to the communities between New Haven and Boston, the Shore Line will remain a key component of the transportation system of the region for the foreseeable future.*

James Brown

CT 4-112.1

Comment: We are opposed to the project because of electromagnetic fields on those near the tracks.

Response: *Comment noted See Response 3.5 in this volume.*

CT 4-112.2

Comment: We are opposed to this project because of the proposed closing of several crossings in Stonington.

Response: *See response to Comment CT 1-3.9.*

CT 4-112.3

Comment: We are opposed to this project because

of the [certain] decrease in property values.

Response: See response to Comment CT 3-14.7.

CT 4-112.4

Comment: We are opposed to this project because of effect of the project on animal life.

Response: See response to Comment CT 4-69.23.

Shirley C. Beal

CT 4-113.1

Comment: In view of the curving road bed and hazards thereof, I believe safety is substantially decreased.

Response: See responses to Comments CT 1-2.9, CT 4-14.8, and CT 4-60.5.

CT 4-113.2

Comment: The money needed for underpasses and overpasses (which would impact negatively on country access) could be well spent on upgrading maintenance and service.

Response: Comment noted.

Rowland Hunt

CT 4-114.1

Comment: The writer supports the project.

Response: Comment noted.

William K. Duff

CT 4-115.1

Comment: The writer opposes the project and requests public hearings.

Response: As part of the public participation process, six public hearings were held inc which comment on the DEIS/R was solicited (See Appendix C of the FEIS/R). In addition, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.

David D. Tura

CT 4-116.1

Comment: The writer opposes the project because of impacts on wildlife and view and the project's expense.

Response: Comment noted.

Robin R. Smith

CT 4-117.1

Comment: The writer opposes the project because:

- cost is high;
- higher maintenance costs;
- lowered property values;
- impact on freight rail traffic;
- impact on maritime traffic;
- damage to environment;
- increased danger to people and animals.

Response: Comment noted.

Charles C. Goodrich

CT 4-118.1

Comment: Are "turbo-powered" trains significantly less expensive to operate than electric trains?

Response: See Response 3.2 in this volume.

Patricia A. O'Leary

CT 4-119.1

Comment: Underplayed is the fact that the airline shuttles will continue to be the dominant choice of business traffic between New York and Boston. Underplayed is the fact that the American family will not ride the train between New York and Boston.

Response: See response to Comment CT 3-33.4.

CT 4-119.2

Comment: Underplayed is the fact that electrification may not be able to achieve a three-hour goal.

Response: See response to Comment CT 4-12.3.

CT 4-119.3

Comment: Underplayed is the fact that the gas turbine train may be able to do so at less cost and less damage to the environment, both visually and in terms of a reduction in the use of fuel and production of pollutants.

Response: See response to comment CT 3-14.32.

CT 4-119.4

Comment: The project will deter, rather than

enhance, tourism.

Response: *The issue of the proposed project's impact on tourism is discussed in Volume I, Section 4.2 of the FEIS/R.*

CT 4-119.5

Comment: The project will limit access to the US Naval Submarine Base on the heels of a struggle to keep it open.

Response: *See response to Comment CT 4-75.2*

CT 4-119.6

Comment: The project will run more trains but curtail service to local towns.

Response: *See responses to Comments CT 1-3.5 and CT 4-12.2.*

CT 4-119.7

Comment: The project will increase noise and vibration.

Response: *See Response 3.6 in this volume.*

CT 4-119.8

Comment: The project will increase the dangers of electromagnetic radiation.

Response: *See Response 3.5 in this volume.*

CT 4-119.9

Comment: The project will increase pollution in rivers, streams and coves.

Response: *Potential pollution impacts associated with the electrification project would primarily be generated during the construction process and be limited to erosion and sedimentation plus the water quality impacts associated with the "trenching" or burial of submarine cables.*

Best management practices will be utilized during construction of the electrical facilities as well as during the installation of catenary poles and submarine cables. Special care will be taken within the Sole Source Aquifer districts.

The project will also have to obtain

Water Quality Certification in Connecticut due to the installation of submarine cables and other wetland impacts.

In summary, the water quality impact of the project should be minimal.

CT 4-119.10

Comment: The project will limit access to beaches.

Response: *Illegal access across the tracks is a hazard to public safety and will be aggressively discouraged. Legal access to beaches and other natural resources will not be infringed by the Proposed Action.*

CT 4-119.11

Comment: The project will produce a visual blight that would be a tragedy.

Response: *See Response 3.7 in this volume.*

Oliver Jensen

CT 4-120.1

Comment: The only sensible concerns I heard or have read about came from the freight railroads like the Providence & Worcester. More passenger service will reduce their access to the line. It occurs to me that replacement of a third track here and there where it has been torn up might help, in this day of electronic cab signals. Someone from FRA or Amtrak should go to Switzerland or England and see how well this is handled there. I've been to both a good many times.

Response: *See Response 3.3 in this volume.*

Ralph F. Sparaco

CT 4-121.1

Comment: I am concerned about the negative impact on my property value.

Response: *See response to Comment CT 3-14.7.*

CT 4-121.2

Comment: If this project is complete, I think it would be fair for Amtrak to buy my property because of the negative environmental impact it would have on this property.

Response: See response to comment CT 3-14.7.

William T. Lasky

CT 4-122.1

Comment: I am concerned about the noise impact.

Response: Comment noted. See Response 3.6 in this volume.

CT 4-122.2

Comment: Re-evaluate the "Energy Average" and "Day Night" sound levels for this area to see if they enter "Normal - Unacceptable" "dBA" levels.

Response: A review of aerial photographs of this area indicates that the closest home is approximately 560 feet from the rail corridor centerline, significantly greater than the 111 ft distance for Site A-2. Based on a re-evaluation of noise impact for the FEIS/R, significant noise impact in this area is not expected to occur at residences located more than 200 feet from the rail corridor, even under worst-case project conditions. This assessment assumes that the background L_{dn} , not including train noise, is about 60 dBA in this area; it is unlikely that the batch plant causes a higher level at this location. In addition, because no at-grade road crossings are located in this vicinity, the train noise projections do not include noise from train horns. Based on these assumptions, the total L_{dn} at this location, including both trains and other noise sources, is expected to increase from an existing level of 61 dBA to a maximum of 64 dBA under worst case project conditions, representing a 3 decibel increase. Because the project criteria allow a 5 decibel noise increase from an existing level of 61 dBA, noise impact is not expected to be significant at this location, even under worst case project conditions.

Laurinda Barrett

CT 4-123.1

Comment: The fence would prohibit the use of these crossings.

Response: Due to the safety concerns of pedestrians crossing the tracks, certain areas of the right-of-way will be fenced. Volume I,

Table 5.1-1 of the FEIS/R discusses the proposed fencing locations.

CT 4-123.2

Comment: Nor do we need quantities of electricity added to the air we breathe.

Response: Comment noted.

CT 4-123.3

Comment: Thought should obviously be given to moving the tracks away from our homes.

Response: Comment noted. Also see Response 3.1 in this volume.

Jack M. MacNeil

CT 4-124.1

Comment: The suggestion is that a sound barrier be placed along the edge of the rail right-of-way.

Response: See response to Comment CT 4-69.15

Judith W. Neurath

CT 4-125.1

Comment: I don't believe that a less than three hour drive will entice people to take the train.

Response: See response to Comment CT 3-14.25.

CT 4-125.2

Comment: The project will destroy the view for all.

Response: Comment noted.

CT 4-125.3

Comment: Electrification itself also endangers people's health.

Response: Comment noted. See Response 3.5 in this volume.

Joel & Linda Maynard

CT 4-126.1

Comment: We are fearful of the long term health effects involved.

Response: Comment noted. See Response 3.5 in this volume.

CT 4-126.2

Comment: We are concerned about increased vibration.

Response: *Comment noted. See Response 3.6 in this volume.*

CT 4-126.3

Comment: The additional noise and unsightly electric poles and wires are also of concern.

Response: *Comment noted. See Responses 3.6 and 3.7 in this volume.*

CT 4-126.4

Comment: I would like to see the published data which shows there are no long term health problems related to residences adjacent to EMF.

Response: *See Response 3.5 in this volume.*

CT 4-126.5

Comment: We don't understand how you can subject the public to such unknown risks for only a 20% reduction in travel time.

Response: *Comment noted.*

CT 4-126.6

Comment: For the amount of money this project costs, there must be some other way to make trains go faster.

Response: *See Responses 3.1 and 3.2 of this volume.*

James J. Musante

CT 4-127.1

Comment: Safe passenger service certainly not [provided] at increased speeds over twisting tracks, corroded trestles and with aged cars. I request that DOT review the safety record of Amtrak.

Response: *The primary mission of FRA is to ensure the safety of the U.S. railroads. As part of this mission, it continuously reviews the safety practices and records of all U.S. rail carriers, passenger and freight. It also reviews safety practices and records in other countries to ensure that U.S. carriers are using state-of-the-art methods to ensure public safety. This research has shown that high-speed rail projects have an excellent safety record throughout the world. This include Amtrak's operation of the Northeast*

Corridor.

Carolyn Malckow

CT 4-128.1

Comment: I am concerned about electromagnetic fields.

Response: *Comment noted. See Response 3.5 in this volume.*

CT 4-128.2

Comment: Power lines will destroy the gentle and aesthetic appearance of my town and those along the shoreline.

Response: *See Response 3.7 in this volume.*

Bruce Avery

CT 4-129.1

Comment: We now know it won't significantly reduce pollution.

Response: *See response to Comment CT 4-105.3.*

CT 4-129.2

Comment: It won't be fast or convenient enough to take many cars off the road.

Response: *See response to Comment CT 3-14.24.*

CT 4-129.3

Comment: It won't create jobs for people in Connecticut. In fact, quite the opposite. 50-300 railroad workers in New Haven will lose jobs.

Response: *The employment impact of the Proposed Action is discussed in Volume 1, Section 4.2 of the FEIS/R. In summary, the proposed Action would create 600 to 700 construction jobs over a three year period. The Proposed Action, together with other NECIP improvements, would result in the creation of approximately 275 permanent positions. Approximately 51 train and engine crew positions would be moved or eliminated at New Haven as a result of eliminating the switch in locomotives at that location. These would be partially offset by approximately 23 new positions created in New Haven. In addition there would be new hires in the area by Amtrak as part of the expansion of the Shoreline East commuter service planned by*

ConnDOT.

CT 4-129.4

Comment: It could affect the viability of a large percentage of hundreds of marine-related businesses in the state, due to bridge closures. It could affect the fuel, gas, and coal supply to the state up the Connecticut and Thames Rivers.

Response: *See response 3.4 in this volume.*

CT 4-129.5

Comment: Why do we want it? To save 20 or 30 minutes? For who? For those people in New Haven? Our neighbors in New York City? It won't be stopping here: New London, or Mystic, or Norwich, or Stonington, yet people in these towns will lose jobs and property and property value and pay for fuel and taxes because of it.

Response: *See response to Comment 1-1.7.*

CT 4-129.6

Comment: Who does [the project] benefit?

Response: *See response to Comment 1-1.7.*

CT 4-129.7

Comment: There are cheaper, safer alternatives that could improve rail travel time.

Response: *See Response 3.2 in this volume.*

Kathy Weinberger

CT 4-130.1

Comment: I am in favor of public transportation, but perhaps the turbo-powered engines would be better.

Response: *See response 3.2 in this volume.*

Leslie Rice

CT 4-131.1

Comment: The writer opposes electrification and requests that alternative routes be re-examined.

Response: *See Response 3.1 in this volume.*

Susan Burfoot

CT 4-132.1

Comment: Make trains affordable for average people. Forget electrification and speed.

Response: *Comment noted.*

Theo Rice

CT 4-133.1

Comment: Consider all the alternatives to electrification of the AMTRAK right of way along the Connecticut shoreline. The Hartford route is more desirable. According to Amtrak's schedule, the distance is 19 miles shorter than the coastline route... I can only estimate the distance [of the "Airline" route], which seems to be about 116 miles: 41 miles less than the shoreline route.

Response: *See Response 3.1 in this volume.*

CT 4-133.2

Comment: The DEIS brushes off the use of alternative propulsion systems in favor of the electric overhead-catenary type train.

Response: *See Response 3.2 in this volume..*

CT 4-133.3

Comment: The DEIS ignored the impact on water traffic on our rivers.

Response: *See Response 3.4 in this volume.*

Joseph Bertoline

CT 4-134.1

Comment: I am concerned about electromagnetic fields.

Response: *See Response 3.5 in this volume.*

CT 4-134.2

Comment: I hope that Amtrak can find an alternate route.

Response: *See Response 3.1 in this volume.*

Mary Anderson

CT 4-135.1

Comment: The overhead electrical wires cantilever from pairs of poles at maximum distance apart of 175 feet, no matter how skillfully designed, will be an endless eyesore through the countryside.

Response: *Comment noted.*

CT 4-135.2

Comment: No one can accurately assess the damage

to the hundreds of coastal inlets, coves and rivers that is certain to occur as bridges are remade, new overpasses constructed, and electrical maintenance areas built.

Response: *All work outlined in the DEIS and FEIS is proposed to occur within the right-of-way except for the electrification facilities and work associated with bridge raising. No changes to the present configuration of the right-of-way is anticipated as part of this project. The anticipated impacts to coastal inlets, coves, and rivers have been noted and mitigative measures would be incorporated. See Volume I, Section 4.12 of the FEIS/R.*

Bill Cannon

CT 4-136.1

Comment: The total lack of any analysis of the impact of increased bridge closings on recreational, commercial and National Defense waterway access and the businesses that it supports is one of the substantive issues that must be addressed in the DEIS.

Response: *See Response 3.4 in this volume.*

CT 4-136.2

Comment: The DEIS should address the noise and vibration impact.

Response: *See Response 3.6 in this volume.*

CT 4-136.3

Comment: The viability of continuing funding for these maintenance expenses is a proper subject to be evaluated in the DEIS.

Response: *See response to Comment CT 4-19.4*

CT 4-136.4

Comment: Therefore, the lifetime maintenance cost of this approach must be analyzed and the viability of its funding, and/or funding for sound insulation, considered before the DEIS is finalized.

Response: *Comment noted.*

CT 4-136.5

Comment: The figure of six receptors being affected

by the project] is obviously wrong!

Response: *Volume I, Section 3.11 of the FEIS/R provides a revised list of VSRs.*

CT 4-136.6

Comment: The DEIS should address EMFs.

Response: *See Response 3.5 in this volume.*

CT 4-136.7

Comment: The DEIS should address future rail freight operations.

Response: *See Response 3.3 in this volume.*

CT 4-136.8

Comment: To present a true picture, the analysis should consider the total generation picture for the U.S. as power pooling and wheeling allow the power to come from anywhere.

Response: *The energy analysis in Volume I, Section 4.6 of the FEIS/R looks at total energy use from the point of fuel consumption (power plant's boiler, or non-electric locomotive's engine) to the movement of passengers.*

CT 4-136.9

Comment: The entire analysis that concludes that the project would impact the view from 34 residences is flawed.

Response: *The 34 residences identified in the DEIS/R were meant to represent the areas where the catenary system might have visual impacts. As described in the Volume I, Section 4.11 of the FEIS/R, these areas will require special consideration in the placement of poles to ensure that any visual impact is mitigated to the extent possible.*

Wallace Fenn

CT 4-137.1

Comment: It does not discuss at all the effect this will have on boat and ship traffic through the bridges.

Response: *See Response 3.4 in this volume.*

CT 4-137.2

Comment: The project will result in increased noise.

Response: See Response 3.6 in this volume.

CT 4-137.3

Comment: The project will result in a spoiled view.

Response: See Response 3.7 in this volume.

CT 4-137.4

Comment: There is increased danger from high speed.

Response: *The operating characteristics of the trains, as well as the vertical and horizontal geometry of the track, track condition, the location of stations, and other factors are used by Amtrak to develop the speed limits at any specific location. FRA has safety regulatory jurisdiction over all aspects of rail operations. Any operations above 110 mph presently require special permission from FRA and Amtrak will have to demonstrate that it can operate safely before that permission will be granted.*

CT 4-137.5

Comment: I am concerned about possible effects of electromagnetic radiation.

Response: See Response 3.5 in this volume.

CT 4-137.6

Comment: You should consider moving the roadbed inland.

Response: See Response 3.1 in this volume.

Daniel Baker

CT 4-138.1

Comment: Section 4.4.1.4, page 4-56, paragraph 3. The paragraph states the predicted noise levels calculated using the noise production model consistently under-predicted the measure levels of noise. The paragraph continues by excusing the error in the predicted levels as an under-estimation of the nighttime activity and other noise sources. It seems that there is large supply of data in existing electrified rail systems that could be applied to estimating the future impact of electrifying the NEC. The model is nice to have, but actual noise levels from an existing system would be a better estimation for future noise levels in the

proposed NEC system.

Response: *Given all the variables involved, including train type, speed, length and schedule, a noise model that accounts for these variables is essential to provide a consistent and valid comparison of existing and future conditions. Although no model is likely to be perfect, the model used is based on actual noise level measurements and observations of diesel and electric train equipment on the Northeast Corridor, and represents the best available method for evaluating the potential noise impacts of the project.*

CT 4-138.2

Comment: Section 4.4.5.3, page 4-77, paragraph 3. In this paragraph and in several other places in the document, the X2000 has been referenced as having noise levels 5 to 10 dB lower than existing diesel or electric locomotive-powered Amtrak trains. The DEIS should make an effort to describe the benefits of new technology in trains that will produce lower noise levels in the future. It may be of significant interest to insert a section that is dedicated to future noise predictions in the NEC which incorporate trends in railway technology. If possible, please forward any data on the X2000 noise characteristics compared to that of the current Amtrak electric and diesel locomotives.

Response: *Noise and vibration measurements of the Swedish X2000 tilt train, operating on the Northeast Corridor in New Jersey, were reported in Section 4.4 of the Noise and Vibration Technical Study in Volume III of the DEIS/R. Similar measurements were later made of the German InterCity Express (ICE) trainset, and the results are reported in Chapter 4 of Volume II of the FEIS/R, along with comparisons of the noise characteristics of the ICE, X2000 and current Amtrak equipment. The potential benefit of the new technology trains has also been evaluated in terms of a "Best Case Build" alternative that assumes the noise characteristics of the ICE trainset. The predicted noise impact for this and other project alternatives is described in*

Volume I, Section 4.4 of the FEIS/R. As a mitigating measure incorporated into this project (Section 5.1.1(d)) Amtrak is required to give significant weight to designs reducing noise and vibration emissions in purchasing equipment for use on the NEC.

CT 4-138.3

Comment: Section 4.5.1.1, page 4-95. This section deals with source noise control and this comment is not specific to just this section. The DEIS depicts the speed and frequency of events of the future system as the driving factors of increased noise along the NEC. Since these factors are so important, more detailed data should be provided for both cases. A chart of noise level verses speed and a chart of noise level verses event frequency for the different types of locomotives should be supplied in this section. These charts would be helpful in analyzing future system noise levels.

Response: *Sample charts of noise level versus speed for various types of rail operations were provided in Figures 4-26 and 4-27 in Section 4.4 of the Noise and Vibration Technical Study in Volume III of the DEIS/R. Similar graphs that incorporate data for the X2000 and ICE trainsets are also included in Chapter 4 of Volume II of the FEIS/R. The effect of event frequency is less amenable to presentation in chart form, and is simpler to describe in narrative form. Assuming no change in the fraction of daily train operations that occur during the nighttime hours (10 P.M. to 7 A.M.), the noise exposure in terms of L_{dn} or $L_{eq}(24)$ will increase by 3 decibels for each doubling of the number of train events. This relationship holds for all train equipment types.*

CT 4-138.4

Comment: Section 4.5.1.2, page 4-96, paragraph 6. The future system proposes 117,800 feet of noise abatement barriers to be constructed along the NEC. These barriers appear to be planned only for residential areas. I know that the rail system runs through or next to protected wetlands in Connecticut and this is

probably true for Rhode Island and Massachusetts. These areas are a vital part of the ecology and the increased traffic, speed, and noise levels will adversely effect these areas. Information on the degree to which these areas will be affected and if noise abatement barriers should be applied should be included in the DEIS.

Response: *The environmental study has identified potential noise impact and mitigation only for residences and other populated noise-sensitive land use. Protected wetlands are not considered noise sensitive except for park areas which have human use.*

CT 4-138.5

Comment: General comment: The noise levels for this system are based on current estimates and current technology. When the system is completed, there should be a system implemented that will monitor the noise and radiated EMF levels along the NEC. This type of sensor system will allow Amtrak officials to determine when a problem in areas of track, catenaries, fixed facilities and the locomotives occur.

Response: *As part of the mitigation contained in the Volume I, Chapter 5 of the FEIS/R, Amtrak will establish programs to monitor noise, vibration and EMF resulting from NEC operations in the study area. The results of this monitoring will be used in determining where mitigation will be developed and the nature of this mitigation.*

Melanie Greenhouse

CT 4-139.1

Comment: The permanent disfigurement of precious coastline, though dubiously presented as ecologically sound, would attract few proponents.

Response: *Comment noted.*

CT 4-139.2

Comment: Is saving ninety minutes of travel time worth destroying fragile ecosystems or even the possibility of health risks?

Response: *Volume I, Chapter 4 of the FEIS/R presents the impacts, both beneficial and adverse, of the Proposed Action and its alternatives.*

CT 4-139.3

Comment: The issue of maritime traffic is yet another factor grossly neglected by the Environmental Impact Study.

Response: *See Response 3.4 in this volume.*

Suzanne Cattanch

CT 4-140.1

Comment: I am concerned about the negative health impact from electromagnetic fields.

Response: *See Response 3.5 in this volume.*

CT 4-140.2

Comment: I understand that under the current plan, New London is excluded from the list of stops for the high speed trains.

Response: *See response to Comment CT 1-3.5.*

CT 4-140.3

Comment: Why not investigate the alternatives?

Response: *See response to Comment CT 1-1.6.*

CT 4-140.4

Comment: And what about those many people whose personal and dear property will be adversely affected.

Response: *Comment noted.*

Fred A. Conti

CT 4-141.1

Comment: The DOT/FRA failed to comply with the regulations promulgated under NEPA, which requires a thorough study of the environmental impact arising from alternatives to the proposed improvement project.

Response: *See Responses 3.1 and 3.2 of this volume.*

CT 4-141.2

Comment: The DOT/FRA failed to adequately assess the adverse economic impact on property values and economic activity in the areas adjacent and affected by the

proposed improvement.

Response: *The issue of the proposed project's impact on real estate values and the municipal tax base are discussed in Volume I, Section 4.2 of the FEIS/R.*

CT 4-141.3

Comment: The market studies employed to estimate the benefits from potential increase in utilization of the upgraded Amtrak services were grossly inadequate for the purpose of justifying the high cost of the project.

Response: *The purpose of the study was not to justify cost, but to predict ridership and thus environmental benefits and impacts.*

CT 4-141.4

Comment: The well documented adverse environmental impacts caused by the impoundment of numerous tidal marshes and coves which have resulted from prior so-called "improvements" of the Amtrak road bed will be perpetuated by the proposed improvements. No further modifications to the road bed should be undertaken until these environmental catastrophes have been addressed.

Response: *The U.S. Army Corps of Engineers under the auspices of Coastal America, conducted an investigation of the affect of transportation structures on these coves. The study concluded that overall bridge/embankment complexes are not a primary cause of saltmarsh degradation, no were they causing significant tidal flow constrictions. In addition, the Proposed Action would not modify tidal flows.*

Bruce Reiber

CT 4-142.1

Comment: The photos show small visual impact of the catenary supports and wires....noise barriers should be included.

Response: *See response to comment CT 4-69.15.*

CT 4-142.2

Comment: This is a solid 8' fence that will have a major negative impact. These barriers

should be included in the photos.

Response: See response to Comment CT 4-69.15.

CT 4-142.3

Comment: The DEIS eliminates speed reductions as noise mitigation technique because it conflicts with the high speed three-hour city to city goal. This needs to be quantified.

- Why is the three hour goal sacred? What's wrong with three hours and ten minutes?
- What's the relationship between noise level and trip times?
- What's the relationship between small changes in trip times and ridership?

Response: *The specific goal of three hour service between Boston and New York City with appropriate intermediate stops was established by Congress.*

The level of noise created by trains along the NEC is a function of equipment, speed and frequency. Except at the higher speed ranges, electric trains are quieter than non-electric (see figure 4.4-1 in Volume I of the FEIS/R). The major source of noise increase comes from more frequent operations. As a consequence, slowing trains from peak speeds of 150 mph to say 110 mph would not significantly alter the noise impact.

Small changes in travel times have a somewhat less than proportionate effect on expected ridership. For example, a 10 percent increase in travel time (from three hours to three hours 18 minutes) would be expected to result in a 4-8 percent reduction in ridership.

CT 4-142.4

Comment: The DEIS disqualifies the non-electrification alternatives.

Response: See Response 3.2 in this volume.

William Cannon

CT 4-143.1

Comment: The most glaring deficiency in the DEIS is the total lack of an objective analysis of the viability of the transfer of passenger traffic from air to train.

Response: See response to Comment CT 3-14.25.

CT 4-143.2

Comment: The gas turbine alternative was again dismissed in the DEIS on page 2-7. The rationale presented states that a locomotive similar to the RTL Turboliner would fail two screening criteria. The first criterion has to do with time savings. It is stated that the gas turbine performance characteristics are similar to diesel-electric units. This may be true for the 1970 technology of the RTL unit chosen for comparison, but if 1990's technology were examined, the answer would be that performance is at least equivalent to the electric option chosen.

Response: See Response 3.2 in this volume.

CT 4-143.3

Comment: The DEIS discussion goes on to state that the gas turbine train would require a locomotive change in Penn Station. The inconsistency in the "grasping for straws" approach to find any reason to dismiss the gas turbine alternate is incredible. The writers of the DEIS want to have their cake and eat it too, i.e., I have to change engines in New York, but I also dismiss the gas turbine because I would have to build refueling depots from Boston to Washington. You can't have both reasons!

Response: *The comment is mingling two different aspects of the alternatives analysis. The PEIS rejected an alternative involving abandonment of the existing electrified system from Washington to New Haven in favor of turbine operation over the entire NEC citing, among other reasons, building refueling facilities. (See Volume I, Section 2.2.3 of the FEIS/R.) Since no change to Amtrak's electric operations between Washington and New York City*

are now proposed, the issue under consideration in this FEIS/R is service between Boston and New York City. Under the Proposed Action electric trains will run from Boston through New York City to Washington. Without extension of electric traction, trains would shift to electric power in either New Haven or New York City.

CT 4-143.4

Comment: The second criterion that the gas turbine purportedly fails is the environmental or financial cost. There is no discussion of why it fails. This is then a fallacious argument that further demonstrates the inadequacy of the DEIS.

Response: *See the response to 3.2 of this volume.*

CT 4-143.5

Comment: Socioeconomic impact. The more frequent trains and the attendant restricted railroad bridge closings will negatively impact the access of the populace to the waters of Long Island Sound. Since the University of CT Dept. of Resource Economics estimates that recreational boating contributes \$1.89 billion to the CT economy annually, even a 10% impact could result in a loss of \$200 million annually. The railroad already has petitioned the Coast Guard to allow not opening bridges in Fairfield County, CT, during rush hours. Again, I reiterate that the DEIS does not address this significant issue at all.

Response: *See Response 3.4 in this volume.*

CT 4-143.6

Comment: Low cycle fatigue failure of the old steel structures and abutments of the NEC will be exacerbated by the high-speed trains. I have been told that even the Japanese dedicated high-speed rail line has been rebuilt approximately each decade due to this problem. Again this issue is totally ignored in the DEIS. The cost of a safety survey and rebuilding, on even a ten year cycle, will be severe and will become astronomical when the impact on high-speed traffic while the tracks and bridges are rebuilt is included.

Response: *Amtrak has been operating high-speed trains on the Northeast Corridor between New York City and Washington, DC for over twenty years, without experiencing the degradation cited by this question. Although high speed operations require higher maintenance standards and constant oversight, Amtrak has not experienced the need to rebuild on a ten year cycle. Also see response to Comment CT 1-2.9.*

CT 4-143.7

Comment: A fast turbine driven train would be usable along the NEC now, you don't need to "electrify." This same train could be used on any rail of sufficient quality throughout the US without the impact of building electric power distribution systems and the power stations to serve them. A \$1.5-2.5 billion power station has tremendous impact on the economics of high-speed electric rail. I should also note that turbine trains are lighter than electric drive trains, thereby minimizing the vibration and low-cycle fatigue damage to rail lines.

Response: *See Response 3.2 in this volume.*

CT 4-143.8

Comment: The DEIS states that high-speed rail service will essentially preclude all freight operations along the corridor. This eliminates any planned use of freight rail service from consideration in the economic development of the entire seaboard north of New Haven. Isn't this contrary to long-term transportation solutions that the US DOT is evaluating?

Response: *See Response 3.3 in this volume.*

CT 4-143.9

Comment: Additional information regarding planned train service apparently will be contained in the yet-to-be released FRA Master Plan for the NEC. Since this information may have significant effect on the resolution of public comments regarding the DEIS, I formally request that revised DEIS be reissued for public comment after the FRA (or other agency) issues the Master Plan for public review and before the FRA/USDOT

takes final action on the PEIS. This reissue of the DEIS should include the public comments received and the proposed resolution of these comments.

Response: *See response to Comment CT 4-80.2.*

George Pilchowski

CT 4-144.1

Comment: The writer opposes the project because of increased train traffic and noise.

Response: *Comment noted. See Response 3.6 in this volume.*

David C. Warner

CT 4-145.1

Comment: The writer supports the project.

Response: *Comment noted.*

David C. Warner

CT 4-146.1

Comment: The writer is supportive of the project.

Response: *Comment noted.*

Susan Ronohagen

CT 4-147.1

Comment: The electrification project will negatively impact our property value. Will you guarantee this will not happen?

Response: *See response to Comment CT 3-14.7.*

CT 4-147.2

Comment: We are concerned about increased noise.

Response: *Comment noted. See Response 3.6 in this volume.*

CT 4-147.3

Comment: We are concerned about increased vibration.

Response: *Comment noted. See Response 3.6 in this volume.*

CT 4-147.4

Comment: We are concerned about EMF.

Response: *Comment noted. See Response 3.5 in this volume.*

CT 4-147.5

Comment: We do not believe that high speed trains will substantially reduce the number of cars on Interstate 95.

Response: *Comment noted. See Response 3.9 in this volume.*

CT 4-147.6

Comment: We would like to know why you are not pursuing a proposal to use turbine powered trains.

Response: *See Response 3.2 in this volume.*

Jerry L. Foote

CT 4-148.1

Comment: The report fails to address the impact of construction of seven third rail sidings, each over two miles long.

Response: *As mitigation of potential adverse impacts on commuter and freight service, the FEIS/R requires Amtrak to develop additional capacity on the NEC main line in the study area. Section 5.1.1(i) specifies the side or passing tracks to be developed. In all cases this represents restoration of previously existing main or side tracks on existing roadbed. The environmental impact of restoring track under such circumstances is insignificant.*

CT 4-148.2

Comment: The report fails to adequately address the visual impact caused by installation of electrical towers and cables.

Response: *See Volume I, Section 4.11 and Response 3.7 in this volume.*

CT 4-148.3

Comment: The report fails to adequately acknowledge continued diesel electric operation on the right-of-way even after electrification.

Response: *The continued use of diesel-electric locomotives along the NEC for commuter rail service is the same in the build and no-build alternatives. Therefore, it was not evaluated as part of this study. Electrification of the NEC does, however, provide the opportunity for commuter rail operators to utilize electric*

locomotives and thus has potential environmental benefits.

CT 4-148.4

Comment: The report fails to consider current technologies when evaluating alternatives.

Response: *Current technologies are discussed in Volume I, Section 2.2 of the FEIS/R.*

CT 4-148.5

Comment: The report fails to fairly consider the loss of jobs in the US caused by the planned purchase of foreign-made rolling stock and other equipment.

Response: *See response to Comment CT 4-16.6.*

CT 4-148.6

Comment: The report fails to admit to numerous operating delays not caused by the type of locomotion and therefore will continue to exist and negate some of the advantages claimed by high speed trains.

Response: *In addition to the electrification project, Amtrak is presently installing a new signalling system and bringing on line a Centralized Electrification and Traffic Control system to provide state of the art operations for trains. These new systems are designed to eliminate the train operations problems experienced in the past. The entire property is being upgraded to be compatible with the requirements of high speed operations.*

CT 4-148.7

Comment: High speed train operation will hinder the development of a meaningful commuter train system along the Connecticut corridor, and therefore the automobile pollution will continue or increase because commuters will be denied the use of rail transportation.

Response: *See Response CT 1-3.8.*

CT 4-148.8

Comment: The report fails to address how high speed operation will transfer riders from private transportation to mass transportation.

Response: *Volume I, Section 4.9 of the FEIS/R discusses the issue of modal choice in general and the predicted shift of travellers from automobiles to rail specifically. Also see response 3.9 in this volume.*

CT 4-148.9

Comment: The report fails to provide adequate research in the claimed reduction of congestion on the highways of Southeastern Connecticut.

Response: *See response to comment CT 4-148.8.*

Eleanor M. Burdick

CT 4-149.1

Comment: It is hard to see what improvement in air quality will be brought about by changes in the time from Boston to New York, especially in consideration of the fact that any tourists who find a train that will stop at any of the local tourist towns will have to taxi to a car rental agency and proceed from there by car.

Response: *Air quality is improved by shifting travellers from automobiles and airplanes to trains, as well as providing less polluting rail operations.*

CT 4-149.2

Comment: The plan in its entirety sounds like a bad dream, and an expensive one. Tunnels and aerial bridges to convey auto traffic over shoreline neighborhoods, environmentally protected land, and estuaries already damaged; underwater cables. It is astonishing that the DEP has given approval.

Response: *Comment acknowledged.*

CT 4-149.3

Comment: I am concerned about EMF.

Response: *Volume I, Sections 3.5 and 4.5 of the FEIS/R present an updated discussion of the EMF issue. This discussion is also summarized at the beginning of Volume III.*

CT 4-149.4

Comment: The poles and wires themselves are a visual affront.

Response: *The issue of the proposed project's impact on visual resources is discussed in Volume I, Section 4.11 of the FEIS/R.*

David Mazzalupo

CT 4-150.1

Comment: First of all, the environment impact statement failed to touch on the subject of the history of this rail line and the environmental impact it has had to this date.

Response: *This issue is beyond the scope of this study.*

CT 4-150.2

Comment: Secondly, I am concern about Chapman's Crossing. The EIS took a weak position on the building of a small pedestrian tunnel. The excuse they used was it would be vulnerable to storms and tidal surges. This is unfounded and with little engineering could be overcome easily. We would be very willing to expand on this at a later date.

Response: *See response 3.8 in this volume.*

Maura A. Welsh

CT 4-151.1

Comment: I am concerned about noise.

Response: *Volume I, Section 4.4 of the FEIS/R discusses the potential noise impacts and Section 5.1 discusses appropriate mitigation. A summary of this discussion is included at the beginning of Volume III.*

CT 4-151.2

Comment: I am concerned about vibration.

Response: *Volume I, Section 4.4 of the FEIS/R discusses the potential vibration impacts and appropriate mitigation. A summary of this discussion is included at the beginning of Volume III.*

CT 4-151.3

Comment: I am concerned about electrical health hazards.

Response: *Volume I, Sections 3.5 and 4.5 of the FEIS/R present an updated discussion of the EMF issue. This discussion is also*

summarized at the beginning of this volume.

CT 4-151.4

Comment: It is my further belief that the Amtrak proposal will destroy the established character and environment of the village of Old Lyme.

Response: *Comment noted.*

CT 4-151.5

Comment: The addition of a third rail track (due to the lack of an operating window for freight movements) will impact the estimated benefits of reduced air pollution.

Response: *The air quality model developed for this proposed project includes existing and planned freight traffic. The construction of a third track is not part of the proposed action and is not evaluated in this study.*

Stuart G. Cole

CT 4-152.1

Comment: The writer supports the project.

Response: *Comment noted.*

Jane Simmons

CT 4-153.1

Comment: The horizon will be destroyed by high voltage wires and more poles to hold them up.

Response: *The issue of the proposed project's impact on visual resources is discussed in Volume I, Section 4.11 of the FEIS/R.*

CT 4-153.2

Comment: If by chance one of the wires breaks and falls into the water, everything within a mile's radius will be instantly electrocuted.

Response: *In the event a wire falls into water, the fault detectors at the substation will de-energize the line. This will prevent electrocution of any people or animals.*

Michael D. Prior

CT 4-154.1

Comment: I am concerned about the potential EMF

health danger and also about the adverse impact on my house's market value since the tracks are so close.

Response: *Volume I, Sections 4.5 and 4.2 of the FEIS/R presents an updated discussion of the EMF issue and potential impacts on property values, respectively.*

Ct 4-154.2

Comment: The catenary system of high tension/high profile wires will be approximately 75' from the house. This seems to be as serious an effect on a visual receptor as a location which views the water. What plans have been made to consider this type of location as an affected visual receptor?

Response: *This area has been evaluated in Volume I, Section 4.11 of the FEIS/R.*

CT 154.3

Comment: Will the level adjacent land be used as a construction staging area with all of the associated noise and nighttime lighting?

Response: *Amtrak equipment, vehicles and supplies would be located and stored at Amtrak staging areas and along the ROW whenever possible. Since Amtrak's design is incomplete at this time, it is unknown whether this land would be utilized as an additional staging area. However, a community liaison office would be set up to ensure residents are kept informed of construction activities.*

Jessica Breen

CT 4-155.1

Comment: I am concerned about the unsuitability of a curvy coastline for high speed trains. Lots of crossings and high speed trains are not compatible or sensible.

Response: *Volume I, Section 2.2 of the FEIS/R contains an expanded discussion of route alternatives and attendant environmental impacts. A summary of this section is provided at the beginning of Volume III.*

CT 4-155.2

Comment: I am concerned about the increased danger. Old bridges along the coastline pose some risk as do the combination of

high speed trains and lots of curves in the tracks. Disruption of waterways' personal boating traffic and that of commercial barges will be guaranteed. Hartford will react when its oil barges are "hung up" due to conflicts. The Coast Guard, Pfizer, and the Navy won't be happy either.

Response: *Volume I, Section 4.9 of the FEIS/R discusses the impact of the proposed project on marine traffic. Also see Response 3.4 of this volume.*

CT 4-155.3

Comment: I am concerned about the decline in property values. Stringing high voltage lines up and down the coastline will devalue personal property and negatively impact commercial businesses who "sell" and depend upon the scenic shoreline for their livelihood. Compounding this travesty would be the added noise, vibrations, and EMF health dangers.

Response: *The issue of the proposed project's impact on real estate values is discussed in Volume I, Section 4.2 of the FEIS/R.*

CT 4-155.4

Comment: I am concerned about competition between commuter and freight traffic. It has been discovered that there is a conflict between available rail and time! Someone will be kicked off.

Response: *The issue of the proposed project's impact on freight rail service and commuter services and their appropriate mitigation are discussed in Volume I, Sections 4.9 and 5.1 of the FEIS/R. These issues are also summarized in Response 3.3 of this volume.*

CT 4-155.5

Comment: I am concerned about adverse health effects. Between the substations with over 100,000 volts and the new electric overhead lines of some 25,000 volts, there may be an increased risk of cancer due to the electromagnetic radiation.

Response: *The question of health risks to people, including train passengers, is addressed in response to other comments, for*

example, CT 4-65.26, CT 3-38.7, CT 1-9.6, MC 4-8.6, MC 4-8.12. Relevant information can also be found in the additional studies for the FEIS/R, Documentation of Occupational Studies of EMF, and Analysis of EMF Impacts on Children. Information contained in these additional studies is presented in Volume II, Sections 5.4 and 5.5 of the FEIS/R.

CT 4-155.6

Comment: I am concerned about the environmental damage and noise pollution. Doubling the number of trains with the added noise and piercing whistles will drive off the egrets, blue herons, and other treasures of southeastern Connecticut.

Response: *The noise impact section of the DEIS, (Volume III, Section 4) indicates that adverse noise impacts for the project are expected to be increased through increased train frequency and speed, however there is no indication that wildlife populations are impacted by the existing service levels. Numerous species of birds, including osprey and mute swan, were observed to be nesting within close proximity to the rail line and would be expected to continue to utilize the adjacent habitat.*

Thomas Tyler

CT 4-156.1

Comment: I want to go through Hartford so that we make out on the deal.

Response: *Volume I, Section 2.2 of the FEIS/R contains an expanded discussion of route alternatives and attendant environmental impacts. A summary of this section is provided at the beginning of Volume III.*

CT 4-156.2

Comment: Also, I desire an extension of 90 days for the Public Comment Period with regards to that ridiculous Draft Environmental Impact Statement.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Stephen & Rochelle Spear

CT 4-157.1

Comment: This writer's comments are generally opposed to the project.

Response: *Comment noted.*

Dora Hill

CT 4-158.1

Comment: [The commenter submitted extensive comments on the Draft Plan for Elimination of Highway At-grade Crossings.]

Response: *These comments have been reviewed, but are not responded to in this report as they are not substantive comments on the DEIS/R for electrification.*

Dennis Algieri, State Senator

RI 1-1.1

Comment: This letter is generally interested in information on the project.

Response: Request noted.

Suzanne Hensler, State Rep.

RI 1-2.1

Comment: I would request that if possible, the substations you speak of could be adjacent to the substations that are already in existence in North Kingston.

Response: *The paralleling station at Kingston draws its 25 kV power from the catenary system and does not require an additional connection to the power utility. Amtrak has located all paralleling stations adjacent to the tracks to minimize the 25 kV connection between the station and the catenary system. This is the case with Kingston; if Amtrak were to locate the paralleling facility adjacent to the existing utility substation, approximately 1,000 feet of 25 kV transmission line would be required to connect the station with the catenary system. By locating the paralleling station adjacent to the tracks this feeder is eliminated.*

RI 1-2.2

Comment: That fencing is erected along the corridor obviously in the area of North Kingston that has been recommended to the Public Utilities Commission.

Response: *Volume I, Section 5.1.1(h) indicates the locations of additional fencing that will be developed as part of the electrification project mitigation measures.*

RI 1-2.3

Comment: One bridge in particular, Stony Lane is being upgraded. I would hope whatever is being proposed for this bridge meets with the specifications of your department so that the bridge will be worked on only once.

Response: *Our records indicate that this is an overhead bridge, number RI 166.87. Amtrak does not own or maintain overhead highway bridges. Amtrak has no plans to raise or undercut this bridge.*

However, the State of Rhode Island does have future plans to repair or replace this bridge.

RI 1-2.4

Comment: E.S. 5.2 I would like an explanation as to why in your opinion there would be no adverse impacts to constituents living parallel to the tracks. Also, explain why no adverse problem with EMFs?

Response: *Additional documentation of literature reviewed regarding potential health impacts of EMF is contained in Volume I, Section 4.5 of the FEIS/R. The conclusion remains that the consensus of the scientific community is that a conclusive link between EMF and cancer has not been established. In addition, the levels of exposure estimated for this project are hundreds to thousands of times lower than interim guidelines for exposure established by international agencies. Also see Response 3.5 in this volume.*

RI 1-2.5

Comment: E.S. 5.2.3 Noise and Vibration. Is one of the Churches that would be impacted St. Francis de Sales in North Kingston?

Response: *No. The results of the DEIS/R analysis did not indicate significant noise or vibration impact at any churches in Rhode Island.*

RI 1-2.6

Comment: E.S. 5.2.6 I have a concern that whatever is done with electrification that you would work closely with RI D.O.T. and the RI Port Authority.

Response: *Amtrak and FRA have been coordinating the planning for the NEC, and design of the electrification project with RIDOT and the Providence and Worcester Railroad. FRA is cooperating with RIDOT and the Federal Highway Administration in the analysis of alternatives to provide rail freight access to the Port at Quonset Point.*

U.S. Rep. Ron Machtley

RI 1-3.1

Comment: This report does not appear to take into

account even current freight rail operations. Specifically, the treatment of freight rail in the discussion of capacity on the Corridor seems to discount the operations of freight rail service, and, in fact, the modelling used to analyze operations neglected to include the movement of freight trains.

Response: *A revised discussion of the current and predicted future movement of freight by rail is presented in Volume I, Section 4.9 of the FEIS/R. Mitigation for potential impacts is also discussed in Volume I, Section 5.1.1(i). It is the conclusion of this analysis that with these mitigation measures, there will not be a significant impact on existing freight services as a result of this proposed project. Also see Response 3.3 in this volume.*

City of Pawtucket

RI 1-4.1

Comment: The commenter opposes any bridge raising due to environmental and safety concerns. The City requests that the existing rail lines be lowered to meet the clearances needed for the Proposed Action.

Response: *None of the bridges within the City of Pawtucket will be raised. Undercutting will allow for clearance at all of these bridge crossings.*

Town of North Kingstown

RI 1-5.1

Comment: These socio-economic impacts [due to limited freight movements] of the project should be mitigated.

Response: *See response to Comment RI 1-3.1.*

RI 1-5.2

Comment: Our review shows inconsistencies between citations. The town would ask that all references to the EG Paralleling Station and Natural Resources reflect the following information:

- Sole Source Aquifer
- Within a local groundwater recharge area
- Designated wellhead area

- Within 1000 feet of three public water supply wells.

Response: *The information cited in the comment is presented in the DEIS/R, Volume III, page 11-56. The tables in the FEIS/R are consistent with this information.*

The mitigation effort at the East Greenwich site will include maximizing the distance to the adjacent wells, minimizing the footprint of the project, stabilizing any slopes and incorporating proper erosion and sedimentation control measures to minimize any detrimental modifications to the surrounding wellhead protection area. Short-term impacts to water quality associated with site development will also be minimized by staging construction equipment and performing any vehicle maintenance off-site, and generally following Best Management Practices for working in aquifer protection areas.

RI 1-5.3

Comment: The town asks that all of the proposed mitigation BMP's be instituted at the EG Paralleling Station.

Response: *Comment noted.*

RI 1-5.4

Comment: Finally, we believe that in Section 3.1 Regulatory Setting, the United States Environmental Protection Agency's Sole Source Aquifer should be listed.

Response: *As noted in Volume 1, Chapter 5, Table 5.6-1, the applicable law for the Sole Source Aquifer program is Section 1424(e) of the Safe Drinking Water Act (42 U.S.C. 300f, 300h - 3(e)), Public Law 93-523.*

This program is administered by the EPA and allows the Director to determine that an area has an aquifer which is the sole or principal drinking water source for an area, and which if contaminated, would create a significant hazard to public health.

Once an area is designated as a Sole Source Aquifer, no commitment of federal

financial assistance to a project may be entered into, if the Administrator determines that the project may contaminate such aquifer through a recharge zone. EPA has a review role in this process of determining impacts. It must be demonstrated that steps have been taken to minimize any detrimental modifications of the natural capabilities of the adjacent wetlands including groundwater recharge functions. FRA has determined that the proposed project with the mitigation contained in Chapter 5 will not threaten the aquifer.

RI 1-5.5

Comment: Pedestrian Crossing: On Table 3.8-3 Old Baptist Road should be identified as being in North Kingstown.

Response: *This error has been corrected in the FEIS/R.*

RI 1-5.6

Comment: Finally, previously we asked for a copy of the design and engineering specifications for the paralleling station; to date, we have not received these materials.

Response: *Amtrak reports that as soon as the 60% design submittal has been accepted by Amtrak, facility drawings will be available to review.*

U.S. Rep. Jack Reed

RI 1-6.1

Comment: I share the state's concern that the draft statement still does not recognize the imperative need to establish a dedicated, third rail line for modern freight service as well as future commuter rail opportunities.

Response: *Volume I, Section 5.1.1(i) of the FEIS/R identifies a number of sidings that will be improved or reinstalled as part of this project. With these sidings and other improvements in place, the proposed project will not significantly affect the provision of commuter or freight service on the NEC. Capacity enhancements are included in the Northeast Corridor Transportation Plan that will accommodate increases in traffic*

projected by the commuter railroads and the freight railroads. These will be implemented when these projections are realized.

The issue of the "third track" goes more to the issue of how best to provide rail freight access to meet the needs of the State's proposed port development at Quonset Point. RIDOT and the Federal Highway Administration is evaluating the alternative approaches to provide this access and FRA is cooperating in the preparation of the EIS on that effort. In addition, the mitigation incorporated into the electrification FEIS/R (Volume I, Section 5.1.1(i) will require Amtrak to develop the electrification project to accommodate whatever approach the State decides to undertake to accommodate the needs of this port. Also see Response 3.3 in this volume.

RI 1-6.2

Comment: There is no commitment to ensure sufficient vertical or lateral clearances for double stack freight trains.

Response: *The NEC main line currently does not have sufficient vertical clearances for double stack trains and such clearances are not required for Amtrak's operations. The State believes such clearances are a necessary part of its proposals to develop the port at Quonset Point and provision of such clearances is part of the State's analysis of the alternatives identified above. The mitigation incorporated into this FEIS/R will ensure that the proposed project does not significantly affect the ability of the State or others to provide such clearances.*

RI 1-6.3

Comment: Indeed, the Rhode Island state Departments of Transportation and Economic Development recently delivered a report on the economic development potential of Davisville to the FRA and the U.S. Department of Transportation, and I would strongly urge that this analysis be fully incorporated in the final Environmental Impact Study.

Response: *See response to Comment RI 1-7-2.*

RI 1-6.4

Comment: There is no mention in the report that removing slower freight trains from the high-traffic, high-speed passenger rail line would increase safety.

Response: *FRA's analysis indicates that the NEC with the capacity enhancements contained in Volume I, Section 5.1.1(i) will be very safe. However, clearly there would be some increase in safety by removing freight service from a portion of the NEC main line.*

Town of East Greenwich

RI 1-7.1

Comment: We are concerned that the electrification will result in our citizenry in proximity to the line being exposed to electromagnetic field (EMF) levels that may adversely effect their health.

Response: *Volume I, Sections 3.5 and 4.5 of the FEIS/R present an updated discussion of the EMF issue. Also see Response 3.5 in this volume.*

RI 1-7.2

Comment: In addition, this project may result in a negative impact on property values in the areas close to the ROW.

Response: *It is the general finding of this study that the preferred alternative will not have a significantly different impact on property values than the No-Build Alternative. Proximity to the rail will not change and the installation of the catenary system is not predicted to influence property values. However, Amtrak is a private corporation and may be liable for impacts to property values that can be proven in court.*

RI 1-7.3

Comment: Another area of local interest and concern is the project's potential effect on our historic "Hill and Harbor" district, which is bisected by the AMTRAK line.

Response: *The evaluation of the potential impact of the proposed project on historic resources has been coordinated with the Rhode Island State Historic Preservation Office (SHPO). FRA has entered into a*

memorandum of agreement with SHPO that details those measures that will be taken to minimize the potential of adverse impacts on historic resources.

RI 1-7.4

Comment: The visual quality and amenity of the [Hill and Harbor] district would suffer by the erection of the poles to support the "catenary" system for the electrification of the line.

Response: *See response to Comment RI 1-8.3.*

RI 1-7.5

Comment: Noise and vibration from the faster trains may contribute to the negative effect on this resource.

Response: *See response to Comment RI 1-8.3.*

U.S. Senator Claiborne Pell

RI 1-8.1

Comment: The deficiency in the DEIS is that it does not correctly include the direct cumulative impact on current and future freight rail service or the indirect impact on land use. The need for appropriate mitigation measures, therefore, is not adequately addressed.

Response: *A revised discussion of the current and predicted future movement of freight by rail is presented in Volume I, Section 4.2 of the FEIS/R. Mitigation for potential impacts is presented in Volume I, Section 5.1.1(i). Also see Response 3.3 in this volume.*

RI 1-8.2

Comment: A reuse plan [for Quonset Point/Davisville] is being prepared and will shortly be submitted to the Navy. That reuse plan constitutes a state/local land use plan which merits recognition in the Final EIS.

Response: *The FEIS/R recognizes that the State plans to develop the port and that RIDOT is presently evaluating alternatives to provide the needed rail freight service access to the port. Amtrak will develop the proposed project in such a way as to accommodate whichever alternative the State chooses to implement.*

RI 1-8.3

Comment: Furthermore, the State of Rhode Island is preparing an EIS for the proposed third track which, I believe, should be included either by reference or as a supplement in the Final EIS.

Response: *The RIDOT's schedule for the EIS on freight service to the port at Quonset Point presently calls for this effort to be completed in mid 1995. Also see response to Comment RI 1-9.2.*

U.S. Senator John Chafee

RI 1-9.1

Comment: The document underestimates the plan's impact on freight rail service.

Response: *The issue of the proposed project's impact on freight rail service and the appropriate mitigation of this impact is discussed in Volume I, Sections 4.2 and 5.1 of the FEIS/R. Also see Response 3.3 in this volume.*

RI DOT, Dante Boffi

RI 2-1.1

Comment: The DEIS proposes no satisfactory mitigation to these adverse impacts on capacity [of freight movements from Quonset Point - Davisville to Boston Switch].

Response: *See response to Comment RI 1-9.1.*

RI 2-1.2

Comment: Development of intermodal transportation opportunities at Quonset Point - Davisville will require the introduction of increased vertical clearances of 20 feet 7 inches between Boston Switch and Davisville. There are several physical restrictions which, if not mitigated, make the introduction of such service impossible.

- The installation of catenary wire under highway bridges would limit vertical clearance potential for freight, rendering increased clearance prohibitively expensive.
- The DEIS states that in certain cases installation of the overhead catenary system could require that certain

bridges be raised to accommodate the freight cars moving today at standard vertical clearances.

- In some locations along the corridor, the installation of the catenary poles would occur in the portion of the right-of-way that would be used to accommodate a third track.

Response: *FRA has directed Amtrak to ensure that the design for the NECIP is coordinated with the State of Rhode Island and Providence & Worcester Railroad in regard to the Davisville/Quonset Point Project. Amtrak will ensure that wherever possible, it coordinates its design and construction action to accommodate any plans for development as part of the Davisville/Quonset Point project, including pole placement and bridge clearances. See section 5.1.1() in Volume I and Response 3.3 in this volume.*

RI 2-1.3

Comment: We are concerned about the conservative 17 foot track centers and the costs associated with a third track alternative designed in this manner.

Response: *This issue is being addressed concurrently in the RI Freight Rail Improvement EIS.*

RI 2-1.4

Comment: We call upon this EIS to reflect the following mitigation measures in its Record of Decision:

- Recognition of RIDOT's EIS on alternate track configurations from Boston Switch to Quonset Point - Davisville, including the considerations of a full length third track alternative.
- Clear indication that design and construction of all the physical needs of the electrification project will not preclude a corridor for a dedicated third track as one of the alternatives to address the negative impacts on current and future freight rail operations.

- Protection of existing clearances under individual overhead structures, in particular, those clearances in the vicinity of Boston Switch and Cranston Yard through mitigation of any clearance reduction resulting from electrification.

Response: *Comment noted. Mitigation measures contained in Volume I, section 5.1.1(i) directly address these concerns.*

RI Port Authority and Economic Development Corporation

RI 2-2.1

Comment: The DEIS fails to account for the potential of employment losses resulting from curtailment of freight rail service to existing customers along the shoreline and fails to assess or recommend measures to mitigate these negative impacts.

Response: *Volume I, Sections 4.2, and 4.9 of the FEIS/R discuss potential impacts (economic and service) to freight rail operations. Associated mitigation is contained in Section 5.1.1(i). Also see Response 3.3 in this volume.*

RI 2-2.2

Comment: Subsequently, as corecipients of the OEA funds for the Base Reuse Project, and pursuant to the US Navy's mandate per the Base Closure Act of 1991, The Base reuse Project Land Use Plan, due for completion in January of 1994, is an integral and legitimate document that should be considered in the FEIS.

Response: *See response to Comment RI 1-9.2.*

RI DOT (Parker)

RI 2-3.1

Comment: In densely populated areas, the raising of bridges for clearances necessary to accommodate electrification will reduce visual views, increase property access difficulties thus affecting property values. **Recommended mitigation: Consider the lowering of the tracks.**

Response: *In certain areas, it is necessary for bridges to be raised because of the technical infeasibility of lowering the*

tracks. Wherever possible, tracks will be lowered.

RI 2-3.2

Comment: Electrification restricts freight rolling stock to 16'8". This restriction prohibits the use of modern day rolling at the Quonset Point/Davisville Industrial Complex. **Recommended mitigation: Rehabilitate/construct a third track to accommodate modern day rolling to and from the Quonset Point/Davisville Industrial Complex.**

Response: *See responses to Comments RI 1-7.1 and RI 1-7.2. Also see Response 3.3 in this volume.*

RI 2-3.3

Comment: The location of the Warwick Substation will require the relocation of a lumber company. Relocation will require a site where rail service is available. Also the relocation will most likely mean the loss of another Rhode Island business. **Recommended mitigation: Select another substation site to allow the lumber company to remain.**

Response: *Suitable alternatives for the Warwick substation site are limited and involve other types of adverse impacts. Relocation of this business would be covered by the provisions of the Uniform Relocation Assistance Act which would mitigate the adverse impact of the project on the company involved.*

RI 2-3.4

Comment: Employment at the Quonset Point/Davisville Industrial Complex cannot be developed to its full potential unless the complex is able to use modern day rolling stock. **Recommended mitigation: Rehabilitate/construct a third track to accommodate modern day rolling stock to and from the Quonset Point/Davisville Industrial Complex.**

Response: *See response to Comment RI 1-7.1.*

RI 2-3.5

Comment: At Kingston Station, the Department of Transportation is undertaking a two phase

project to rehabilitate the station as an intermodal facility. The former Kingston Tower will be moved to the station site as part of this project. We are concerned about the erection of barriers on the Route 138 bridge, adjacent to the station site, that they will impact the visual view of the completed project. **Recommended mitigation: Design bridge barriers so that will not impede the visual view of the completed project.**

Response: *Design of the barrier on this bridge will be coordinated with the SHPO.*

RI 2-3.6

Comment: The DEIS should include "Draft Section 4(f) Evaluation" in the title and the document should contain a separate Draft Section 4(f) Evaluation Section or Chapter. **Recommended mitigation: Add a separate Draft Section 4(f) Evaluation Section or Chapter and revise the title.**

Response: *A 4(f) statement has been prepared for the Kingston paralleling station and is included in Volume I, Appendix G of the FEIS/R.*

RI 2-3.7

Comment: The following should be added to the Federal Regulations of this Technical Study. Public Law 99-647: Blackstone River Valley National Heritage Corridor Commission. The corridor Commission reviews all activities and/or projects which are federally funded and/or regulated to assure consistence with corridor objectives. A segment of the electrification runs through the corridor, therefore, coordination with the Corridor Commission is required. **Recommended mitigation: Add Public Law 99-647 to the list of Federal Regulations of Technical Study 3.**

Response: *This omission has been corrected in the FEIS/R. The NECIP will be coordinated with the Commission through the Rhode Island SHPO.*

RI 2-3.8

Comment: Within the project's area of potential effects, a number of historic resources

have been categorized as "probably eligible" or "potentially eligible" for listing in the National Register of Historic Places. **Recommended mitigation: Documents for historic resources categorized as "probably eligible" or "potentially eligible" should be further evaluated and documents prepared in order to determine National Register eligibility.**

Response: *The format and terminology for this section was agreed to by the RI SHPO. In accordance with federal regulations, these properties will be considered eligible resources on a consensual basis without preparing formal Determinations of Eligibility.*

RI 2-3.9

Comment: The preliminary catenary pole configuration shown in Technical Study 3 will have to be redesigned to accommodate a third track for freight use between Davisville and Boston Switch. RIDOT is currently performing an independent EIS for the proposed third track. **Recommended mitigation: A portal catenary design should be added to Technical Study 3 and all pole locations between Davisville and Boston Switch must be coordinated with RIDOT.**

Response: *See response to Comment RI 1-7.1.*

RI 2-3.10

Comment: The noise barrier designs contained in the DEIS study are preliminary. Detailed barrier designs will be developed during final project design with aesthetic, structural, and acoustical factors to be addressed. **Recommended mitigation: The RIDOT should be involved in the decision to construct or not to construct noise barriers and should influence the barrier design both structurally and aesthetically.**

Response: *This issue will be coordinated with RIDOT.*

RI 2-3.11

Comment: This issue [EMF] has been raised at many RIDOT highway project hearings. Other

than placing the power lines underground we know of no other methods of mitigation. **Recommended mitigation:** The DEIS should explain the inherent safety problems of third rail and underground electrical feeding systems.

Response: *Volume I, Sections 3.5 and 4.5 of the FEIS/R present a revised discussion of the EMF issue.*

RI 2-3.12

Comment: TPC modeling should be verified prior to completion of the EIS. **Recommended mitigation:** Verify TPC modeling.

Response: *The TPC model has been successfully used for 15 years. The TPC is a computer simulation that requires inputs on train, track, and operating data, produces a realistic train schedule, and has been verified.*

RI 2-3.13

Comment: The Providence Paralleling Station is located within the limits of the proposed Providence Layover Yard for commuter rail service. **Recommended mitigation:** Select another site and perform further archaeological testing.

Response: *The Providence Paralleling station has been relocated outside the layover yard.*

RI 2-3.14

Comment: Fencing was installed within the public right of way areas in East Greenwich and Warwick. Additional fencing could be necessary in urbanized residential areas. Potential fencing areas were identified by RIPUC in conjunction with Amtrak's Boston Division Engineering Office. **Recommended mitigation:** Contact the Boston Division Engineer's Office to locate those Rhode Island sites requiring fencing.

Response: *Comment noted. See response to Comment RI 1-2.2.*

RI 2-3.15

Comment: The Wolf Rocks Road Crossing at Exeter, Rhode Island is a Public Crossing and should be included in the data for this Section [Technical Study 8 Public Safety]

Recommended mitigation: Add Wolf Rocks Road to the data.

Response: *This omission has been corrected in the FEIS/R.*

RI 2-3.16

Comment: The clearance restrictions introduced by electrification further reduce the possibility of using modern day rolling stock to continue development at the Quonset Point/Davisville Industrial Complex.

Response: *See response to Comment RI 1-7.1.*

RI 2-3.17

Comment: Freight train projections, generated by the State of Rhode Island to serve the Quonset Point/Davisville Industrial Complex, indicate between 10 and 18 additional trains are required. Only two freight trains were accounted for in drafting the DEIS. The DEIS contains statements that additional freight trains have run on a night time schedule. **Recommended mitigation:** Rehabilitate/construct a third track to accommodate modern day rolling on an operational schedule providing safe and efficient freight service to and from the Quonset Point/Davisville Industrial Complex.

Response: *Volume I, Sections 4.2 and 4.9 of the FEIS/R presents a revised discussion of the impacts of electrification on freight traffic. The mitigation of these potential impacts is discussed in Section 5.1.1. Also see response to Comment RI 1-7.1 and response 3.3 in this volume.*

RI 2-3.18

Comment: The parking garage at the Providence Station is not owned and operated by the State of Rhode Island. **Recommended mitigation:** Correct ownership in the DEIS Statement/Report.

Response: *Agreed. However, Volume III of the DEIS/R is not being reissued and the FEIS/R does not discuss this property's ownership. Comment noted.*

RI 2-3.19

Comment: Construction detours for projects requiring traffic detours may conflict with ongoing local and State highway construction projects. **Recommended mitigation: Coordinate all detour routes with local and State agencies.**

Response: *All detour route will be coordinated with the appropriate State and local agencies.*

RI DEM (F. Vincent)

RI 2-4.1

Comment: The DEIS states that "the greatest environmental benefits would come in the area of air quality" (page 5-1) but does not adequately support this assertion.

Response: *A revised discussion of air quality benefits is provided in Volume I, Section 4.10 of the FEIS/R.*

RI 2-4.2

Comment: However, the figures presented do not take into account the potential increase in pollutant loads due to the increased usage of truck transportation for freight if the rail freight industry is displaced by electrification commuter service.

Response: *Impacts that could result from a modal shift of freight from rail to truck are discussed in Volume I, Sections 4.2, 4.6, 4.9, and 4.10 of the FEIS/R. However, with mitigation included in Chapter 5, no impacts on freight service are anticipated.*

RI 2-4.3

Comment: When will this "master plan" be completed and available for public review?

Response: *The Northeast Corridor Transportation Plan (previously referred to as the FRA Master Plan) was published on in July, 1994 and provided to interested state agencies.*

RI 2-4.4

Comment: The socioeconomic aspects of conversion from rail freight to trucking which are of great concern to the entire state.

Response: *See response to comment RI-2-4.2*

RI 2-4.5

Comment: Section 10.3.1.2, third paragraph. The highest ozone concentration in Providence in 1991 was 0.116 ppm, however, the highest concentration in the State in 1991 was 0.166 ppm at the Alton Jones Campus of URI (AIRS Site Code 440030002).

Response: *It is true that the highest ozone reading in Rhode Island in 1991 was reported to be 0.166 ppm at the Alton Jones Campus of URI. The Rockefeller Library site in Providence is much closer to the NEC than is the URI Campus site, which is located in West Greenwich. The Providence site was deemed to be more representative of local ozone levels than was the URI site, and, therefore, the level of 0.116 ppm was used in the analysis.*

RI 2-4.6

Comment: Section 10.3.1.2, second paragraph. The emissions inventory for VOC's for the project area in Rhode Island should include Washington County as well as Providence and Kent Counties as the Northeast Corridor Improvement Project is located in all three Counties.

Response: *VOC emissions inventory data for Washington County was not available at the time the DEIS/R was prepared. This data has been included in the FEIS/R.*

RI 2-4.7

Comment: Table 10.3. The "% of Total" figure for point sources in Rhode Island is not correct.

Response: *The % of Total for Point Sources in Table 10.3 was incorrectly reported as 0. The correct value should be 10. This error has been corrected in the FEIS/R.*

RI 2-4.8

Comment: Section 10.4.2.1, first paragraph, third sentence. The projection of a decrease in VMT from 1992 to 2010 is wholly unrealistic, not substantiated by long term trends, and will not be supported by RIDEM. Is this an error in terminology?

Response: *The text on page 10-29 of Technical Study 10 contains a typographical error.*

The existing text reads: "Between 1992 and 2010, with a no-build scenario, vehicle-miles-travelled (VMTs) in the NEC are projected to expected to decrease by over 40 percent." The correct text should read: "Between 1992 and 2010, with a no-build scenario, vehicle-miles-traveled (VMTs) in the NEC are projected to increase. But because of the Federal Motor Vehicle Emissions Control Program (FMVCP) and the state Inspection and Maintenance (I/M) programs, automobile emissions are expected to decrease by over 40 percent."

RI 2-4.9

Comment: Even a projection of an increase in VMT of 40% by 2010 may be conservative. This sentence contradicts the first sentence of Section 10.4.2.2.

Response: See response to comment RI 2-4.8.

RI 2-4.10

Comment: Section 3.12.1.1, first paragraph. In Rhode Island, the RIDEM Division of Freshwater Wetlands must determine whether or not wetlands are delineated correctly through their application process. Since this has not yet occurred, Amtrak should realize that the wetlands boundaries described in the DEIS are not necessarily accurate under Rhode Island law.

Response: *The wetlands boundaries for each site have been confirmed with the local authorities for accuracy.*

RI 2-4.11

Comment: Section 3.12.1.1, last paragraph and Section 4.12.3.4, first paragraph. The Rhode Island Freshwater Wetlands Program requires compensation for any fill placed within the 100 year floodplain of a freshwater body, even if the amount of fill to be placed is relatively small. Therefore, floodplain compensation appears to be required for the Richmond substation.

Response: *The Richmond switching station has been moved approximately 1000 feet west of the original location which was adjacent to the Pawcatuck River. The new site is*

located approximately 440 feet east of Meadow Brook. The current location is not expected to impact the wetlands or floodplains associated with either water body.

RI 2-4.12

Comment: Would such a [wayside noise] barrier be located within the Amtrak right-of-way, in already disturbed areas?

Response: *Yes. It is anticipated that all noise barriers would be located within the right-of-way.*

RI 2-4.13

Comment: The DEIS does not provide enough information about possible mitigative measures for RIDEM to recommend any one measure for vibration control.

Response: *Volume I, Section 5.1.1(d) of the FEIS/R discusses potential vibration mitigation. The selection of the appropriate mitigation technique will be performed on a site-by-site basis to ensure technical feasibility and maximum benefit to the sensitive receptors.*

RI 2-4.14

Comment: The Kingston paralleling is within the Great Swamp Management Area, a RIDEM Wildlife Management Area. This fact should be clearly stated in the Environmental Impact Statement.

Response: *This error has been corrected and a 4(f) statement is now included in Volume I, Appendix G of the FEIS/R.*

RI 2-4.15

Comment: While these measures appear reasonable, the project consultants should confer with RIDEM's Division of Fish, Wildlife and Estuarine Resources (RIDEM F&W) to develop the mitigation plan for this site.

Response: *Volume I of the FEIS/R includes the Section 4(f) evaluation for the Kingston paralleling station site. Mitigation of impacts to the Great Swamp Wildlife Management Area was developed in consultation with RIDEM.*

RI 2-4.16

Comment: The Department will require that construction in this area be timed to avoid the crucial nesting and breeding season for Ospreys, which is approximately March through August.

Response: *Comment noted.*

RI 2-4.17

Comment: In any area where a length of fencing long enough to interfere with wildlife passage is to be erected, measures must be implemented to accommodate such passage. These measures should be designed in consultation with RIDEM F&W.

Response: *In consultation with the RIDEM Division of Fish and Wildlife, all proposed fencing locations in Rhode Island were reviewed and appropriate changes recommended, including reducing fencing on the Forge Road to Rocky Hill Road segment. Other locations in Rhode Island were determined to be in urban or residential areas with little impact to wildlife.*

RI 2-4.18

Comment: Section 4.12.2.1, first paragraph. The term buffer zone is no longer used by RIDEM to describe the 50 ft. setback from wetlands. The correct term to use in this context "perimeter wetland." "Riverbank wetland" is the appropriate term for the setback from rivers and streams.

Response: *The term buffer zone has been replaced with setback to generally describe the distance from wetlands for all three states.*

RI 2-4.19

Comment: Section 4.12.2.5, paragraph 2. RI's Water Quality Regulations for Water Pollution Control define surface waters to include wetlands. Wetlands should therefore be added to the list of surface waters in this section.

Response: *This error has been corrected in the FEIS/R.*

RI 2-4.20

Comment: Please specify what types of spills are expected to occur from the project area. Are these spills construction related only? More detailed information with regard to probable adverse inputs to state waters would be helpful in assessing the potential impacts to water quality.

Response: *As discussed in meetings with RIDEM personnel, any spills associated with the project could include leaks during the operational phase of the project plus construction vehicle impacts.*

- 1) *Spill contingency plans have been prepared to address leakage during operation of the paralleling stations, switching stations, and substation.*

Transformer coolant will be mineral oil as opposed to oil containing PCBs, which were traditionally used in these types of facilities.

All facilities will have impermeable containment areas in the event that spills do occur.

- 2) *Construction impacts will be minimized by staging and maintaining vehicles off-site and utilizing Best Management Practices for working in an aquifer area.*

Adverse impacts to water quality will be minimized by replacing bridges in-kind as opposed to increasing surface area and runoff. Site-specific plans will detail erosion and sedimentation plans. The installation of catenary poles will be incorporated in the water quality management effort, and will include erosion and sedimentation control and consultation with the hazardous waste section on disposal of fill materials.

RI 2-4.21

Comment: As such, supplemental information confirming that there will be no changes in the quality and quantity of stormwater flow from the trackbed must be added in the final EIS.

Response: *The quantity of stormwater flow will be*

unchanged, as there is no increase in impervious surface on the track bed. Quality, however, will be improved as the contaminants associated with diesel operation will be eliminated.

RI 2-4.22

Comment: Section 4.12.3.1, page 4-54, last paragraph. Appropriate best management practices should be employed to prevent degradation of water quality by stormwater run-off; measures should address temporary soil disturbance due to construction and runoff from newly constructed impervious surfaces.

Response: *Volume I, Sections 5.1.1(l) and 5.2 discuss best management practices for mitigation, including those affecting stormwater runoff and temporary soil disturbance.*

RI Office of Strategic Planning

RI 2-5.1

Comment: p.ES-9, ES.5 Environmental Impacts, ES.5.2.6 Transportation: Speaks of the potential adverse impacts to the P&W operations but fails to address impacts from:

- a. existing freight users switching to truck mode; and
- b. potential and current truck shippers (import autos) switching to freight rail mode.

Response: *See response to Comment RI 1-7.1.*

RI 2-5.2

Comment: p.ES-10, ES.5.2.7 Air Quality: There is no mention of potential adverse impacts on air quality from switching current freight traffic to trucks.

Response: *See response to Comment RI-2-4.2.*

RI 2-5.3

Comment: p.3-2, 3.1.1.3 Applicable Rhode Island Regulations Policies and Guide Lines: This section should include the Rhode Island Freight Rail Plan. Element #661 of the State Guide Plan goals and policies.

Response: *Comment noted.*

RI 2-5.4

Comment: p.3-5, 3.2 Socioeconomics, 3.2.2 Employment: Does not account for potential of employment losses resulting from curtailment of freight rail service to existing customers along Shore Line.

Response: *Section 4.2 of the FEIS/R discusses the potential employment impacts of the diversion of freight rail to truck. However, due to the mitigation proposed for freight rail users, no employment impacts are predicted to be caused by this issue.*

RI 2-5.5

Comment: p.3-18, 3.9.1.2 Freight Service Clearance Requirements: Reference should be made to P&W's Increased Overhead Clearance Study Central Falls to Davisville.

Response: *This study, prepared by T.K. Dyer, Inc., considers alternative measures for providing increased freight clearance between Boston Switch and Davisville. While the provision of increased freight clearances is beyond the scope of this study, Amtrak will design and construct the electrification system to accommodate future construction of a parallel third track by the State of Rhode Island.*

RI 2-5.6

Comment: p.4-3, 4.2.3 Socioeconomic Impacts: The impacts to freight rail operations in Rhode Island are not assessed.

Response: *Volume I, Sections 4.2 of the FEIS/R discusses potential impacts to freight rail of the proposed project.*

RI 2-5.7

Comment: p.4-23, Energy: The increase in petroleum usage resulting from switching current shipments from freight rail to truck is not calculated.

Response: *See response to comment RI-2-4.2.*

RI 2-5.8

Comment: DEIS fails to assess the impacts of increased truck traffic on the transportation system.

Response: See response to comment RI-2-4.2.

RI 2-5.9

Comment: However, the DEIS fails to assess or recommend measures to mitigate these negative impacts [to freight rail].

Response: *The issue of the proposed project's impact on freight rail service and the appropriate mitigation of this impact is discussed in Volume I, Section 5.1.1(i) of the FEIS/R. Also see Response 3.3 in this volume.*

RI DEM

RI 2-6.1

Comment: This site [Kingston P.S.] is dedicated for use as a state-owned wildlife management land and other non-compatible uses, perhaps including a paralleling station, would not be allowed by the state or federal government. If no practical alternative to this site exists, Amtrak may seek exemption from this requirement from RIDEM's Division of Fish, Wildlife, and Estuarine Resources (FWER) with the concurrence of the federal Fish and Wildlife Bureau.

Response: *Comment noted. A 4(f) statement has been prepared and is included in Volume I, Appendix G of the FEIS/R.*

RI 2-6.2

Comment: If the paralleling station is located in the Great Swamp, mitigation should include avoidance of the large 48" plus diameter oak tree at the site. Construction should be as close to the tracks as possible to minimize woodland disturbance. Impact associated with the facility and the access road and mitigation measures proposed should be presented to RIDEM for review and comment.

Response: *Comment noted.*

RI 2-6.3

Comment: Osprey are a Rhode Island species of special interest and several of these birds breed and rear young in the Great Swamp. Timing of construction to avoid disturbance is critical. Construction disturbance in the area should be avoided during the period of April 15 to August

15 of any year. Osprey also nest on utility poles so the proposed catenary could attract nesting birds. Electrocution or other injury to these birds is a possibility that should be addressed. The location of the substation should not affect the osprey.

Response: *Comment noted.*

RI 2-6.4

Comment: No expansion of the existing railbed that runs through the management area should occur without prior review by RIDEM.

Response: *Comment noted.*

RI 2-6.5

Comment: RIDEM recommends against fencing of the railbed as it runs through the Great Swamp unless absolutely necessary for public safety. If fencing is required, mitigation would need to be provided. It should be noted that the area is forested land and swamp and is not in proximity to human habitations.

Response: *No fencing is proposed for the Great Swamp Wildlife Management Area.*

Rhode Island Historical Preservation Commission

RI 2-7.1

Comment: The Historical Preservation Commission requested additional information to complete their analysis of the DEIS/R.

Response: *The requested information was forwarded to the Commission.*

RI Dept. of Economic Development

RI 2-8.1

Comment: Amtrak's proposed electrification may affect the State of Rhode Island's efforts to provide the freight rail access between Central Falls and Davisville essential for development of a commercial port at Quonset Point.

Response: *The mitigation contained in Volume I, Section 5.1.1(i) will result in a design of the electrification project that will accommodate whichever alternative the State chooses to provide freight access to the port. See also Response 3.3 in this volume.*

Rhode Island Historical Preservation Commission

RI 2-9.1

Comment: In order to prevent the catenary system from adversely affecting the historic setting in these locations (MP 171.8 - 172.25, 184.9 - 185.8, 141.6, 153.5, 154.04, 158.2, 181.7), it will be necessary to site the poles with extreme care and perhaps to select a color scheme that will minimize their appearance.

Response: *Amtrak will coordinate the placement and finish of the poles in these areas with the Historical Preservation Commission.*

RI 2-9.2

Comment: Electrical Stations The Exeter and Elmwood Paralleling Stations are both located adjacent to historic resources (the Slocum Farm and Sodco, M.P. 162 and the Gorham factory complex, M.P. 181.70). We will need to develop more detailed information on Station siting and design to determine whether there will be a significant effect at either location.

Response: *To facilitate technical review, all supplemental information regarding evaluation of potential effects to historic and archaeological resources was provided to the State Historic Preservation Office. The results of the recommended consultation with the Advisory Council on Historic Preservation are discussed in the Memoranda of Agreement (MOAs).*

RI 2-9.3

Comment: Bridges, Overhead Clearance The proposed replacement of the Kenyon School Road Bridge (M.P. 154.04) will have an effect on the historic setting of Kenyon; The Route 138 Bridge in Kingston (M.P. 158.32) would be affected by the proposed raising as might the Kingston Station - We will need to review more information on the proposed work here to determine the effects and the possible means to avoid or mitigate them.

Response: *See response to comment RI 2-9.3.*

RI 2-9.4

Comment: Efforts to avoid or mitigate these potential adverse effects [from protective barriers] should include alternative design

studies of protective barriers or other methods of protecting the electrical system.

Response: *Final design of the barriers will be reviewed and approved by the State Historic Preservation Office in each state.*

RI 2-9.5

Comment: The Pawtucket River Railroad Bridge (M.P. 179.16) and the Blackstone River Railroad bridge (190.55) will be affected by structural modification to accommodate the catenary system. We will need to review more detailed information on these modification to determine what means to avoid or mitigate are available.

Response: *See response to comment RI 2-9.3.*

The Providence Foundation

RI 3-1.1

Comment: There is discussion about additional parking demand around the Providence Station due to electrification. Demand is expected to increase from 200 spaces to 665 spaces. As you may know, the train station is located in the city's new Capitol Center Project. There is ample existing and planned parking to service this demand.

Response: *Comment noted.*

Colfax, Inc.

RI 3-2.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-2.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to

clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to Comment RI 1-7.1.*

Northeast Corridor Initiative

RI 3-3.1

Comment: This writer supports the project on the grounds that electrification will improve air quality.

Response: *Comment noted.*

Seafreeze, Ltd.

RI 3-4.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-4.2

Comment: We believe that the study must include measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to Comment RI 1-7.1.*

G. M. Gannon Co., Inc.

RI 3-5.1

Comment: We believe that the study should include plans to accommodate modern rail freight.

Response: *See response to Comment RI 1-7.1.*

Johnson Bros. Co.

RI 3-6.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-6.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to comment RI 1-7.1.*

Narragansett Electric

RI 3-7.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-7.2

Comment: We believe that the study must include such mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to comment RI 1-7.1.*

George Mann Co., Inc.

RI 3-8.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-8.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and

passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: See response to comment RI 1-7.1.

NORAD

RI 3-9.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: See response 3.3 of this volume.

RI 3-9.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: See response to comment RI 1-7.1.

Save the Bay

RI 3-10.1

Comment: There should be a plan to provide an alternate means of mass transit, so as not to have a negative air quality impact during construction generated by the use of single occupancy vehicles.

Response: *The Northeast Corridor Transportation Plan identifies those measures needed to accommodate increased levels of commuter rail service on the NEC main line. The proposed project will facilitate conversion of commuter rail service from diesel to electric operation which will further improve the air quality benefits of this form of mass transportation..*

RI 3-10.2

Comment: We are in favor of improving and keeping freight in this corridor and would like to see small business in RI not be penalized by having to run their freight at night.

Response: See response 3.3 in this volume.

Greater Prov. Chamb. of Comm.

RI 3-11.1

Comment: It is critical that the issue of preserving freight rail service in Rhode Island be addressed and I urge Amtrak, the Federal Government, and the State to work together to identify specific mitigating measures to address this critical economic development issue. Measures such as ensuring sufficient freight clearances and a third track dedicated to freight rail service should be considered in the electrification design plans.

Response: See response to comment RI 1-7.1.

RI Association of Railroad Passengers

RI 3-12.1

Comment: First, the Bridge at RTE 138 in West Kingston (on 2-17 and elsewhere) is referred to as Main Street. It is actually an extension of Kingstown Road. (Main Street is located several miles away in Wakefield).

Response: *Agreed. However, this bridge has been dropped from the analysis because it is no longer proposed for raising by Amtrak.*

RI 3-12.2

Comment: In fact, the [Pettaconsett Avenue] bridge allows traffic to cross in only one direction (from east to west).

Response: *Figure 4.9-3 has been corrected to illustrate one-way traffic flow from the east side of the bridge to the west. The discussion of detour routes has also been modified to include the Lincoln Avenue underpass.*

RI 3-12.3

Comment: Our conclusion is that the reconstruction work of these two bridges would cause far less impact than implied in the Draft EIS.

Response: *Comment noted.*

RI 3-12.4

Comment: Fourth, The Paralleling Station at Providence described in Figure A-18

should be renamed Woodlawn, since that is the neighborhood of Pawtucket it is located in.

Response: *The identifying names of the electrification facilities refer to the area in which the original site was located. Since the beginning of the design process, some facilities have moved and may no longer reside in the corresponding locations they were named for. In order to avoid confusion in design and evaluation of the proposed system, name designations will not change.*

RI 3-12.5

Comment: Page 1-7 describes the current corridor as a mostly two track system for all but the northernmost nine miles which are comprised of three tracks and a short, four track segment with the Providence Station area. In fact there are five tracks in the Providence Station area and three plus tracks run between Providence + Boston switch, a distance of about seven miles.

Response: *This error has been corrected in the FEIS/R.*

Quebecor Printing (T. DuPrey)

RI 3-13.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-13.2

Comment: We believe that the study must include such mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to Comment RI 1-7.1.*

Audubon Society of RI

RI 3-14.1

Comment: We ask that the final EIS detail the conflict between local rail service and high speed intercity rail.

Response: *Potential impacts to current and future commuter rail services are discussed in Volume I, Section 4.9 of the FEIS/R.*

RI 3-14.2

Comment: We request that special attention be given to preventing access and providing caution signs because local youngsters have been observed using the bridge as a diving platform.

Response: *We have informed Amtrak of this concern. As indicated in Volume I, Appendix A, the Richmond Switching Station will be completely fenced to prevent access to the electrical components. Caution signs will also be posted. For safety reasons, Amtrak prohibits unauthorized access to the railroad right-of-way. As the right-of-way is private property, unauthorized access constitutes trespassing, and it is Amtrak's stated policy to aggressively enforce the trespassing statutes.*

RI 3-14.3

Comment: We are concerned about EMF exposures. Have there been any studies comparing the health of workers on the Washington to New Haven line?

Response: *The discussion of EMF issues has been expanded in the FEIS/R. See Response 3.5 in the beginning of this volume. with regard to a study of workers on the existing electrified portion of the NEC, FRA is not aware of any such studies. Recently the National Institute of Occupational Safety and Health indicated a study of this type, and FRA is cooperating in this effort.*

RI 3-14.4

Comment: We ask that Osprey nesting platforms be constructed, and they be protected from intrusion.

Response: *Amtrak has agreed to assist RIDEM in the installation of these platforms. FRA's studies have shown that Osprey are*

relatively insensitive to rail operations and the period of concern is during construction. Mitigation measures contained in Chapter 5 limit construction in the vicinity of Osprey nests during the nesting season.

RI 3-14.5

Comment: The FEIS should review the use of solar energy.

Response: *Solar energy presently does not lend itself to railroad uses other than for at grade crossing protection that would not be involved in this project. Mitigation contained in Chapter 5 does require Amtrak to maximize the energy efficiency of its facilities.*

RI 3-14.6

Comment: We would like to see a section on recycling materials from construction projects to the maximum extent possible.

Response: Recycling is an integral part of railroad construction practices. Wood cross ties and rail freed by trackwork are cascaded into other railines, ballast is cleaned and reused and older open deck bridges are converted to ballasted deck. Amtrak has stated that it will continue these procedures and expand recycling to the maximum practicable. As a consequence, a specific plan is not required.

Quebecor Printing (M. Blackburn)

RI 3-15.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-15.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to

handle modern freight.

Response: *See response to Comment RI 1-7.1.*

Quebecor Printing (L Andreano)

RI 3-16.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See Response 3.3 of this volume.*

RI 3-16.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response 3.3 of this volume.*

Quebecor Printing (H. Brown)

RI 3-17.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-17.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to Comment RI 1-7.1.*

Quebecor Printing (M. Pender)

RI 3-18.1

Comment: We believe that the study must make

clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-18.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to Comment RI 1-7.1.*

Quebecor Printing (A. Foran)

RI 3-19.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-19.2

Comment: We believe that the study must include such mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to Comment RI 1-7.1.*

Quebecor Printing (C. Hyson)

RI 3-20.1

Comment: We believe that the study must make clear that, in its current form, the electrification project will indeed have a serious adverse impact on freight rail service and the customers it serves.

Response: *See response 3.3 of this volume.*

RI 3-20.2

Comment: We believe that the study must include mitigating measures in response to the very real problems created for freight rail by the NECIP. These mitigating measures include additional track capacity in the form of third track and passing sidings. With respect to clearance conditions the project must be designed so as to protect the ability to handle modern freight.

Response: *See response to Comment RI 1-7.1.*

RI Airport Corp.

RI 3-21.1

Comment: The anticipated shift of 250,000 air passengers to rail needs to be verified against current and projected T. F. Green data with emphasis on current flights to New York, and attention to passengers who fly to New York as part of a connecting flight to a follow-up destination.

Response: *The implications of projected diversion of Providence-New York air travelers to improved rail service for current and future use of T.F. Green Airport has been discussed in detail with RIDOT and T.F. Green Planning Board officials. The implication of drastic reductions in future T.F. Green utilization due to diversion to improved rail service appears to stem from underestimation of current use of that airport, specifically by failing to include passengers using regional airlines providing regularly scheduled Providence-New York services.*

Bruce Hamilton

RI 4-1.1

Comments: To restrict rail freight access to the Davisville Post and QP/D would be restrict the state's economic development, and no entity supported by American tax dollars should be allowed to do that.

Response: *See response to Comment RI 1-7.1.*

Roy Dempsey

RI 4-2.1

Comments: My suggestion is to implement a pilot high-speed rail safety awareness program in Warwick, RI. The project would have

as its goal a model safety plan that would be implemented in this section of the rail corridor and could also be used as a standard or guideline for pedestrian safety along the entire corridor.

Response: *Comment noted. Such a program is included in Section 5.1.1(h) in Volume I.*

Robert J. Judge

RI 4-3.1

Comment: The homeowners on Yawgoo Mill Pond, believe that our fresh water view across the pond to the sod farms beyond qualifies as a visually sensitive receptor (VSR) as described in the DEIS/R.

Response: *This area has been evaluated in Volume I, Section 4.11 of the FEIS/R.*

RI 4-3.2

Comment: Extra care must be taken to prevent this [cable splices being dumped in the water] from happening again in this environmentally sensitive area. The pond is part of the Chipuxet River, a sole source aquifer.

Response: *Amtrak's Design/Build contract for the Electrification Project requires the Contractor to agree to comply with all the requirements of section 114 of the Clean Air Act, (42 U.S.C. 7414), and section 308 of the Clean Water Act (33 U.S.C. 1318), relating to inspection, monitoring, entry, reports and information, as well as other requirements specified in section 114 and section 308 of the Air Act and the Water Act, and all regulations and guidelines issued thereunder before the award of this contract.*

Amtrak's construction operating procedures require that all waste materials generated by construction must be removed from Amtrak property and disposed of in accordance with all local, state and Federal regulations.

Sarah F. Bliven

RI 4-4.1

Comment: I feel that this bridge is within the 200 foot buffer zone of the Pawcatuck River and is not travelled by 3,215 cars a day.

Response: *Table 9-12 in the DEIS/R incorrectly listed the daily traffic crossing the Kenyon School Road Bridge. Traffic counts conducted in early 1993 indicated the following vehicle count information:*

*Daily = 349;
AM Peak = 19;
PM Peak = 30.*

Response:

This table has been corrected in the FEIS/R. Also, although the bridge is located on the edge of the buffer zone, no adverse impacts to the Pawcatuck River are anticipated due to the requirement, in Chapter 5, that Amtrak utilize Best Management Practices during construction.

RI 4-4.2

Comment: Rather than build a super-structure designed for 3,215 cars per day, I would suggest that it be replaced with a more suitable pedestrian bridge.

Response: *Amtrak is working on the design of this building with the Town of Richmond, which wants a vehicular bridge and not a pedestrian bridge. They have requested that the bridge be designed to minimize the impact on the local community and at same time be compatible with the character of the community.*

Amtrak is also working with the State of Rhode Island to obtain design waivers to accommodate the town's request.

Michael A. Waldman

RI 4-5.1

Comment: A newer and higher [Kenyon School Road] bridge would be detrimental to the nature of the village. If the bridge is to be replaced it would seem feasible that a pedestrian bridge could be utilized.

Response: *See response to Comment RI 4-5.1.*

RI 4-5.2

Comment: I would also like to see some type of sound barrier installed along the tracks through the village.

Response: *Noise mitigation measures are outlined in Volume I, Section 5.1.1(d) of the FEIS/R*

*and summarized at the beginning of
Volume III.*

Brian H. Manning

RI 4-6.1

Comment: [The writer supports the project on the grounds that electrification will benefit air quality and eliminate the engine change at New Haven.]

Response: *Comment noted.*

Oscar K. Shelton, Jr.

RI 4-7.1

Comment: [The writer supports the project and points out that there is no need for construction of a third track.]

Response: *The proposed action does not include the establishment of a third track, nor does the study recommend a third track as a mitigative measure for impacts to freight movements. However, the Rhode Island Department of Transportation is considering the construction of a third track as a separate project and is preparing an EIS as part of that consideration.*

RI 4-7.2

Comment: If the State and the Federal Government really want to spend a \$100 million to improve rail service in this state, a much better idea is to build a new station and track to connect the Green State Airport to Amtrak's main line in Warwick.

Response: *Comment noted.*

Town of Sharon, MA

MA 1-1.1

Comment: There is no design plan showing the extent of roadway grade changes necessary to meet the elevation requirements of the overhead catenary (19.21 feet from top of track) at the Maskwonicut Bridge. The Town would prefer to have the bridge and approaches widened.

Response: *This statement expressing concern over the lack of design detail for the proposed raising and reconstruction of the Maskwonicut Street Bridge is noted. The proposed reconstruction would involve raising the bridge superstructure to achieve a 19.21 foot vertical clearance over the railroad tracks. This would allow maintenance of existing sight distances for a 30 MPH design based on ASHTO standards. The existing 10.5 foot lanes with an 8 foot graded shoulder on the north approach would be upgraded to two 11-foot lanes with 4-foot paved shoulders. Amtrak will coordinate the design with the town. The 90% Level Design Submission was forwarded to the Town of Sharon by Amtrak and response was received from them by letter dated 5/16/94.*

MA 1-1.2

Comment: However, the study seems to have overlooked the likely redirection of traffic over Richard's Avenue and Canton Street.

Response: *While Depot Street will form the primary detour route during the raising or replacement of the Maskwonicut Street Bridge, some traffic will likely use Richard's Avenue and Canton Street, despite the 11 foot clearance limitation on Canton Street Bridge.*

MA 1-1.3

Comment: Traffic could not be realistically rerouted over Maskwonicut St. as shown in Figure 4.9-4.

Response: *The Massachusetts Highway Department has committed to maintaining open one traffic lane in each direction on Depot Street during the construction period at the Depot Street Bridge. Therefore, the*

detour route will not be necessary during reconstruction of this bridge.

MA 1-1.4

Comment: Plans for the Depot Street bridge rebuilding should include access for handicapped in accordance with ADA requirements.

Response: *The Massachusetts Highway Department has committed to coordinate the Depot Street Bridge design with the MBTA to provide for handicapped access to the station.*

MA 1-1.5

Comment: The bridge reconstruction must be coordinated with MBTA plans for the relocated platforms at the adjacent Sharon Commuter Rail station.

Response: *The Massachusetts Highway Department has committed to requiring that pedestrian and vehicular access to the station, as presently provided, remain during the Depot Street Bridge construction period.*

U.S. Rep. Joe Moakley

MA 1-2.1

Comment: [Congressman Moakley forwarded several letters sent to him for inclusion in the public record.]

Response: *The individual letters have been included in section MA 4 (Individuals) found later in this Volume.*

Boston City Councilor, Thomas M. Keane, Jr.

MA 1-3.1

Comment: The proposed substation would wield a devastating blow to the Roxbury Crossing community's revitalization efforts.

Response: *Comment noted.*

MA 1-3.2

Comment: As submitted, the DEIS/R lacks any discussion regarding alternative Boston sites for the substation. Similarly, there is virtually no discussion of the potential impacts of the proposed substation.

Response: *This information is contained in Volume I, Appendix K of the FEIS/R.*

Town of Westwood Planning Board

MA 1-4.1

Comment: The report stated that electrification demand alone would exceed the capacity of the Route 128 Station parking lot by 50 percent and this does not include the commuter parking demand which is much greater. However, the report stated that no additional parking was planned at this time (Vol. III p. 9-15) and that Amtrak was "discussing" parking improvements with the MBTA (Vol III p. 0-35).

Response: *Forecasts indicate that demand for parking by Amtrak passengers will reach 1,230 spaces by 2010. With commuter rail parking demand, total parking demand will exceed the existing parking supply at this station. Amtrak has committed to working with EOTC and the MBTA to provide the additional parking at the Route 128 Station required to satisfy intercity and commuter passenger demand and achieve agency clean air goals. The development of additional parking at the Route 128 Station will be evaluated in a separate environmental process undertaken by the MBTA.*

MA 1-4.2

Comment: Mitigation of the intersection of Blue Hill Drive and University Avenue, which is frequently at service level F, will be accomplished by MHD signalization according to the report (Vol III p. 9-34). But the scheduling and funding of this improvement is not specified and is unknown.

Response: *The mitigation project at the intersection of Blue Hill Drive and University Avenue referenced in the DEIS/R is presently not under consideration by MHD. However, the development of additional parking at the Route 128 Station will be evaluated by the MBTA in the future in a separate, expanded environmental process. Potential traffic impacts at this intersection and measures to offset these impacts will be assessed in this separate environmental process.*

MA 1-4.3

Comment: The intersection of Blue Hill Drive and Route 128 southbound ramps will

deteriorate to level F, but the report merely states that Amtrak should contact the MHD so that improvements can be made during the Route 128 add-a-lane project sometime in the future (vol. III p. 9-31).

Response: *The Route 128 Add-a-Lane project is scheduled for construction in the late 1990s. In addition, the development of additional parking at the Route 128 Station will be evaluated by the MBTA in a separate, expanded environmental process. Potential traffic impacts at the Blue Hill Drive/Route 128 Southbound ramps intersection and measures to offset these impacts will be assessed in this separate environmental process.*

Rep. John E. McDonough

MA 1-5.1

Comment: I state categorically that no draft report was received by my Office until I personally requested one in, late November.

Response: *Volume I of the draft document was mailed to 1160 individuals, organizations and agencies, including the respondent. After his contacting the project office, two additional copies of the DEIS/R were hand-delivered to Representative McDonough. At the request of Representatives McDonough and Fitzgerald, a legislative briefing was held on January 11, 1994 at which FRA staff made presentations on the project and answered questions. Following the briefing, community meetings were held in Jamaica Plain and Roxbury on January 12 and 13 respectively, and at the request of MEPA, the comment period was extended six weeks to January 21, 1994.*

MA 1-5.2

Comment: In terms of substance, the draft report does not offer any substantive response to the concerns of abutting residents in terms of the electro-magnetic fields, noise, and vibration.

Response: *Potential impacts from EMF exposure and noise and vibration from the proposed project and associated*

mitigation for significant adverse impacts are discussed in Volume I, Sections 4.4 and 4.5 of the FEIS/R.

Boston Councilman Gareth Saunders

MA 1-6.1

Comment: I am asking for a 45-day comment period extension on the basis that the Roxbury community was not properly notified about the EIS and has not had the opportunity to fully review this document. I am, also, requesting a public hearing in Roxbury to review the EIS and have Amtrak and the U.S. Department of Transportation Federal Railroad Administration make presentations.

Response: *At the request of MEPA, the MEPA and NEPA deadlines for submitting comments on the document were extended by six and seven weeks respectively to January 21, 1994. In addition, two public information meetings were held on January in Mission Hill for residents of Roxbury.*

MA 1-6.2

Comment: I am very concerned about the possible effects this proposed electrification project at Roxbury Crossing will have on the residents of my district.

Response: *The potential exposure to EMF at Roxbury Crossing is discussed in Volume I, Section 4.5 and Appendix K of the FEIS/R. Alternative locations for the Roxbury Crossing substation are also discussed. Also see Response 3.5 in this volume.*

Boston Parks & Rec. Dept.

MA 1-7.1

Comment: The corridor in the Boston area contains a large number of public parks. They have been frequently misidentified as other land uses in Vol II: Land Use and Regulated Areas.

Response: *Following consultation with the Boston Parks and Recreation Department, Table 3.1-1, Appendix B, Volume I of the DEIS/R was updated to correct these errors.*

MA 1-7.2

Comment: We believe this DEIS/R lacks sufficient detail to fully disclose possible adverse impacts on open space resources in the vicinity of the corridor in the Boston segment.

Response: *See response to Comment MA-1-7.1.*

Boston Transportation Department

MA 1-8.1

Comment: The Draft Environmental Impact Statement/Report raises a number of concerns about the impacts of this project on Boston residents, including noise, vibration and electromagnetic fields.

Response: *Volume I, Sections 4.4 and 4.5 of the FEIS/R discuss noise and vibration and EMF (respectively) impacts. Also see Responses 3.5 and 3.6 in this volume.*

Representative Kevin Fitzgerald

MA 1-9.1

Comment: My opposition to the substation siting is based on its proximity to:

- (1) the residential community of Mission Hill especially Mission Main, Alice Taylor Apartments and Homes at Roxbury Crossing
- (2) schools
- (3) youth recreational facilities
- (4) health center
- (5) day care facilities.

Response: *Substantial concern was expressed in comments on the DEIS/R over the location of the northernmost substation at a vacant parcel of land in the Roxbury Crossing neighborhood of Boston. As a result, FRA undertook an extensive review of possible alternative sites. The Roxbury Crossing site remains the technically superior site. However, at least one alternative has been identified that may be technically feasible and could avoid some of the concerns raised by the Roxbury Crossing site.*

FRA believes that the best way to determine the location of the

northernmost substation site is through an open process of review and evaluation of the alternative sites involving Amtrak, the local communities, the appropriate agencies of the City and State including the Executive Office of Environmental Affairs and Massachusetts Bay Transportation Authority. As a consequence, although the FEIS/R discusses the impacts of location of the substation at Roxbury Crossing, FRA is deferring its decision on the location of the northernmost substation. FRA will work with the various interested parties identified above over the next several months to resolve the siting of this substation. At the conclusion of that process, appropriate supplements to this FEIS/R will be prepared.

Rep. Marie-Louise Kehoe

MA 1-10.1

Comment: I am concerned that this project will draw additional traffic into the Westwood neighborhoods, including the Weatherbee Estates.

Response: *Goody, Clancy & Associates, Inc., completed a report entitled "Parking Area and Station Improvements: 128 Dedham Westwood (Phase 1A - Conceptual Design) dated January 31, 1991. According to the traffic analysis completed for this report, less than 10 percent of the traffic expected to park at Route 128 Station travels through the Blue Hill Drive/Canton Street intersection. Given the direct access provided by Blue Hill Drive and the limited station-traffic through the Blue Hill Drive/Canton Street intersection, it is unlikely that the Weatherbee Estates will experience growth in traffic related to the Amtrak project. The development of additional parking at the Route 128 Station will be evaluated by the MBTA in a separate, expanded environmental process.*

Representative Kevin Fitzgerald

MA 1-11.1

Comment: My main opposition to the plan evolves around the siting of the substation at Roxbury Crossing.

Response: *See response to Comment MA 1-9.1.*

MA 1-11.2

Comment: The proximity to the Mission Hill residential community (Mission Main, Alice Taylor Apartments and Homes at Roxbury Crossing) is not only a major health threat, but contrary to Amtrak's guidelines for siting.

Response: *See response to comment MA 1-9.1.*

MA 1-11.3

Comment: In addition to the substation, I would like to see more details and solutions to noise, vibration, public safety, and public health.

Response: *Volume I, Section 4.4 of the FEIS/R discusses noise and vibration impacts. Public health and safety impacts are discussed in Section 4.8.*

Metropolitan Area Planning Council

MA 2-1.1

Comment: This writer supports the project.

Response: *Comment noted.*

Mass Highway Dept., Office of the Commissioner

MA 2-2.1

Comment: Other major transportation projects impacted by the electrification program have not been properly addressed, including: (Statewide) - the scheduled replacement of several highway bridges spanning the trackage of the Northeast Corridor, Attleboro to Boston.

Response: *The MBTA, which owns the Northeast Corridor trackage within Massachusetts, reviews all project plans and submits detailed comments at all stages of the design. In addition, Amtrak works closely with the MBTA and with the Massachusetts Highways Department to accommodate bridge work designs and actual construction work over the rail line and to minimize conflicts and costs. Amtrak meets monthly with Massachusetts Highway Department and Central Artery/Tunnel officials to ensure the coordination of these two projects in the Boston area.*

MA 2-2.2

Comment: Other major transportation projects impacted by the electrification program have not been properly addressed, including: (Boston/Cambridge) - the construction of the Central Artery/Third Harbor Tunnel Project.

Response: *Coordination between the NECIP and the Central Artery/Tunnel (CA/T) project are discussed in Volume I, Section 4.9 of the FEIS/R. This coordination is also the subject of monthly meetings between Amtrak and CA/T project staff. Also see response to Comment MA 2-3.3.*

MA 2-2.3

Comment: Other major transportation projects impacted by the electrification program have not been properly addressed, including: (Boston) - the proposed North Station/South Station Rail Link.

Response: *The electrification design for the tunnel (if constructed) would be integrated into NEC electrification system and the two systems would be fully compatible.*

MA 2-2.4

Comment: Other major transportation projects impacted by the electrification program have not been properly addressed, including: (Statewide) - the future establishment of rail line routes with "Double-stack" clearance capabilities.

Response: *The proposed project will not reduce the existing clearance of any bridge. There are no definitive plans to undertake a double stack clearance program in Massachusetts that would involve the NEC main line. Notwithstanding this, certain project elements would tend to minimize potential impacts on future efforts of the State or others to undertake such a program. Existing clearances over the tracks will be maintained and the catenary poles will be sized to permit the wires to be raised to accommodate higher clearances if and when a clearance program is undertaken. A clearance program on a line with the existing heavy commuter and intercity traffic volumes of the NEC main line will be complex. The proposed project should not significantly*

add to that complexity.

Mass Highway Dept.-Ctrl. Artery/Tunnel Project

MA 2-3.1

Comment: The DEIS/R does not identify impacts of the proposal to the Central Artery/Tunnel (CA/T) Project, consequently, neither does it propose mitigation for such impacts which could increase CA/T Project costs and delay construction schedules.

Response: *See response to Comment MA 2-2.2.*

MA 2-3.2

Comment: The Electrification Project is a major proposed project that impacts the City of Boston, a substantial portion of the New England areas, and beyond.

Response: *The potential benefits and impacts of the project on residents of this area are contained in Volume I, Chapter 4 of the FEIS/R.*

MA 2-3.3

Comment: The Electrification Project interfaces with a major portion of the CA/T Project's construction of highway elements immediately over, under, and adjacent to the railroad lines to be electrified. The only reference found to the CA/T Project is in Section 9.4.4.1, Traffic Operations Impacts, regarding improvements planned for the Summer Street/Atlantic Avenue intersection.

Response: *The Central Artery/Tunnel (CA/T) project is being developed by the Massachusetts Highway Department (MHD) and the Federal Highway Administration (FHWA) which will provide approximately 80% of the funds for this undertaking. The CA/T will cross the NEC main line, which is owned by the MBTA, a sister agency of the MHD and this line would be upgraded by Amtrak using funds provided by FRA. The issues raised in this and the following 18 comments are related to the coordination of the design and implementation of these two complex projects.*

Subsequent to the release of the DEIS/R, Amtrak and MHD began a series of

monthly coordination meetings to address these issues. It is FRA's understanding that the substance of these issues has been resolved at the staff level and this will be reflected in the final design and implementing agreements. However, should there be any issues that cannot be resolved by Amtrak and MHD, FRA and FHWA will act jointly to ensure that such conflicts do not adversely affect the implementation of either project.

MA 2-3.4

Comment: The Electrification Project has not evaluated its impacts on the CA/T Project sufficiently, and has not provided mitigation of those impacts which could increase CA/T Project costs and delay construction schedules.

Response: See response to Comment MA 2-3.3.

MA 2-3.5

Comment: The CA/T Project staff has been advised that this submission contains minimal design information relative to the South Station area, as this section scheduled for completion at the end of the proposed Electrification Project. Therefore, the design relative to the South Station area should not be considered to be at the 60 percent completion level.

Response: See response to Comment MA 2-3.3.

MA 2-3.6

Comment: MHD requests that the Electrification Project FEIS/R require the Electrification Project to design, install, and fund electrification system modifications which allow sectionalized de-energization of the catenary system between the areas identified below.

- Shoreline mainline tracks between Back Bay Station and Tower 1 Eastbound signal
- Dorchester Branch tracks between South Station and southerly side of future Broadway Highway Bridge (approximately 300 feet southerly of existing Broadway Highway Bridge)

- Dorchester Branch tracks between southerly side of future Broadway highway bridge and Southampton Yard.

Response: See response to Comment MA 2-3.3.

MA 2-3.7

Comment: MHD requests that the Electrification Project FEIS/R require the Electrification Project to identify and provide design details for all locations where catenary supports will require direct attachment to bridges and/or structures owned by the MHD.

Response: See response to Comment MA 2-3.3.

MA 2-3.8

Comment: MHD requests that the Electrification Project FEIS/R require the Electrification Project to identify other locations within the CA/T Project area where the proposed Electrification Project may impact the CA/T Project.

Response: See response to Comment MA 2-3.3.

MA 2-3.9

Comment: MHD requests that the Electrification Project FEIS/R require the Electrification Project to develop and fund a specific mitigation plan, acceptable to the CA/T Project, which eliminates any CA/T Project schedule delays or construction cost increases caused by; a) the inability to modify the catenary design to provide the sectionalized de-energization capability outlined above, or, b) the requirement to directly attach catenary supports to MHD owned facilities. The mitigation plan shall consider the following options in addition to other modifications:

- Rescheduling of trains requiring electric locomotives.
- Using diesel locomotives easterly of Back Bay Station to power specific Amtrak electrified trains.
- Use diesel locomotives to switch electric locomotive trains between South Station and Southampton

Yard.

- Use existing or expanded electrical systems to provide "hotel power" for heating and cooling of trains temporarily stored at Southampton Yard.
- Develop a site-specific shielding system of the catenary wires which allows normal construction activities to progress while the catenary system is energized.

Response: See response to Comment MA 2-3.3.

MA 2-3.10

Comment: MHD requests that the Electrification Project FEIS/R require the Electrification Project to confirm in writing that the Cove Interlocking will require re-configuration of the existing crossovers and proposed CA/T Project D010A contract track crossovers to support installation of the catenary system. MHD requests that the Electrification Project FEIS/R require the Electrification Project to implement and fund all actions necessary for design and construction of railroad track and signal modifications which allow the track and signal changes required to support the CA/T Project construction schedules, if re-configuration of the Cove Interlocking is necessary to support installation of the catenary system.

Response: See response to Comment MA 2-3.3.

MA 2-3.11

Comment: MHD requests that the Electrification Project FEIS/R requires the Electrification Project to provide a design of the catenary system to accommodate a 21'6" equipment clearance under the relocated Broadway Bridge to be reconstructed by the CA/T Project to allow future double-stack freight movements via the Dorchester Branch.

Response: See response to Comment MA 2-3.3.

MA 2-3.12

Comment: MHD requests that the Electrification Project FEIS/R fully evaluate a protection

of the catenary system that is independent of the bridge structures, including but not limited to horizontal barriers extending from the lower sections of the overhead bridge structures.

Response: See response to Comment MA 2-3.3.

MA 2-3.13

Comment: MHD requests that the Electrification Project FEIS/R provide funding for the installation and maintenance of the barriers or other protection systems which are directly affixed to MHD structures.

Response: Amtrak and the Massachusetts Highway Department are in the process of finalizing an agreement to cover the installation of barriers and other protection systems directly affixed to MHD structures.

MA 2-3.14

Comment: MHD requests that the Electrification Project FEIS/R develop or furnish written criteria and specifications for design and installation of bridge barriers which include references that detail the basis for the criteria and specifications.

Response: Barrier placement is discussed in Volume I, Section 4.3 of the FEIS/R. See also response to Comment MA 2-3.13.

MA 2-3.15

Comment: Specific issues to be addressed include CA/T Project EIS commitments potentially affected by the proposed Electrification Project.

Response: See response to Comment MA 2-3.3.

MA 2-3.16

Comment: Specific issues to be addressed include Construction interfaces, including:

- construction scheduling
- construction sequencing
- construction impacts to CA/T Project contracts.

Response: See response to Comment MA 2-3.3.

MA 2-3.17

Comment: Specific issues to be addressed include: Impacts to traffic operations in the Boston area during and after construction of the proposed Electrification Project and the CA/T Project.

Response: *See response to Comment MA 2-3.3.*

MA 2-3.18

Comment: Specific issues to be addressed include: Identification and evaluation of interfaces and impacts for planned and potential projects in the Boston South Bay area, including:

- South Station Transportation Center
- MBTA Transitway Project
- Railroad Clearance Improvement Project for Double-stacked Freight Movements
- North Station/South Station Rail Link.

Response: South Station Transportation Center: *see Volume I, Section 4.9*
MBTA Transitway Project: *No impacts are anticipated on this project by the Proposed Action.*
Railroad Clearance: *See response MA 2-2.4*
North Station -- South Station rail link: *No impacts are anticipated on this project by the Proposed Action.*

MA-DEP (Donald Squires)

MA 2-4.1

Comment: This writer has no comments.

Response: *No response required.*

Boston Redevelopment Authority

MA 2-5.1

Comment: Mitigation measures to reduce both noise and vibration impacts, during construction and operation of the project, will be essential. The provision of mitigation should not be dependent on purely economic factors; it must be adequately funded by the project, not "subject to available funding" (Vol. iii, pg. 4-103).

Response: *Volume I, Section 5.1.1(d) of the FEIS/R discusses the proposed mitigation for noise and vibration.*

MA 2-5.2

Comment: The use of welded rails should be considered for those portions of the right-of-way which do not have them. In addition, ballast mats should be installed to reduce vibration impacts since they have been found to be particularly effective.

Response: *Comment noted.*

MA 2-5.3

Comment: Roxbury Crossing Substation - Included in the electrification project is a proposed electrical substation in the Roxbury Crossing section of Boston. The proposed site, approximately one-half acre in size, is located in an area of mixed commercial and residential use and is characterized in the DEIS/R as an "Architecturally sensitive area." In close proximity to the site is a recently-constructed low-income housing development, the Madison Park High School/Humphrey Occupational Resources Center, several other schools, and the Southwest Corridor Park. The DEIS/R admits that the substation could be out of scale and character with the existing neighborhood (table 5.2-1) and may be architecturally incompatible with the character of the surrounding area (vol. 1, pg. 5-15). Furthermore, the proposed site is characterized as having moderate potential for archaeological sensitivity. In view of these potential adverse impacts on the surrounding development, we recommend that the project proponent investigate alternative sites which may be more appropriate for a substation use and would not be out of character with their surroundings.

Response: *See response to Comment MA 1-9.1.*

MA 2-5.4

Comment: Another issue involves the potential effects of electromagnetic fields (EMFs) which would be produced by the operation of the substation.

Response: *Volume I, Section 4.5.3 and Volume III, Section 5.5.4 of the DEIS/R discuss potential EMF exposure from substations. Also see Response 3.5 in this volume.*

MA 2-5.5

Comment: The MEPA Certificate requested a level-of-service analysis at Dartmouth Street/Columbus Avenue (Back Bay Station) to determine the impacts of more frequent passenger rail service on vehicular traffic in the vicinity of the station. We therefore request that this analysis be provided in the FEIS/R.

Response: *A clarification to the MEPA Certificate determined that the level-of-service analysis of this intersection would not be required.*

MA 2-5.6

Comment: However, nowhere in the DEIS/R is there any analysis of the potential impact of these significant increases on existing pedestrian conditions.

Response: *Volume I, Section 4.9 of the FEIS/R presents a revised discussion of Amtrak pedestrian traffic in the areas of South Station and Back Bay.*

MA 2-5.7

Comment: The Final EIS/R should update and clarify the status of future parking proposals at South Station.

Response: *Volume I, Section 4.9 of the FEIS/R discusses the construction of long-term parking for Amtrak passengers at South Station.*

MA 2-5.8

Comment: We recommend that the proposed bridge modifications and track lowerings, as well as the catenary profile, take into account the needs to increase clearances to accommodate the double stack and tri-level cars so as not to severely restrict or inhibit freight operation in the corridor or to require prohibitively costly modifications in the future.

Response: *See Response 3.3 and response to Comment MA 2-2.4.*

MA 2-5.9

Comment: The ability of a train passing through Roxbury Crossing at 150 mph to reduce its speed sufficiently to that required at the nearby Back Bay Station is questionable.

Response: *The operating characteristics of the trains, as well as the vertical and horizontal geometry of the track, track condition, the location of stations, and other factors are used by Amtrak to develop the speeds at any specific location. FRA has safety regulatory jurisdiction over all aspects of rail operations. Any operations above 110 mph presently require specific approval from FRA and Amtrak will have to demonstrate that it can operate safely at this location before that approval will be granted.*

MA 2-5.10

Comment: The impact of installing the catenary system on the feasibility of air-right structures needs to be evaluated and reported in the FEIS/R

Response: *The catenary will have no adverse impacts on the feasibility of air-right structures. Indeed, they improve the feasibility of such structures by offering an opportunity to eliminate diesel exhaust emissions in the Southwest Corridor when the MBTA eventually shifts to electric operation.*

MA 2-5.11

Comment: Further, the visual impact of the catenary poles and wires on the residential neighborhoods of Roxbury, Jamaica Plain, and Hyde Park, and on the numerous historic properties located therein, needs to be addressed.

Response: *Section 4.11 addresses the visual impact of the proposed action. The effects of the catenary on historic properties is addressed in the MOA reached between FRA and the SHPO.*

MA 2-5.12

Comment: Also not addressed in the DEIS/R is whether the boat section in the Southwest Corridor would need to be lowered at any

of the bridge crossings, and if so, the impact such lowering would have on the boat section itself and on any existing stations. This information should be provided in the final document.

Response: *Amtrak reports that after checking the clearances at the various overhead bridges in this area, it has been determined that the boat section will not need to be lowered.*

MA 2-5.13

Comment: Table 3.1-1: For the Boston segment, this table indicates only 5 churches within the corridor. However, the maps in Vol. II show a considerably larger number of churches within the corridor.

Response: *This error has been corrected in the FEIS/R.*

MA 2-5.14

Comment: Pg. 3-4: In the Back Bay Station area description, it should be noted that the Pavilion at Park Plaza Project is no longer viable.

Response: *This has been noted in the FEIS/R.*

MA 2-5.15

Comment: Pg. 3-6: It is incorrect to categorize Hyde Park as a "minority" neighborhood. According to the 1990 Census, Hyde Park is at least 72% white.

Response: *This error has been corrected in the FEIS/R.*

MA 2-5.16

Comment: Pg. 3-8: City of Boston regulations respecting noise should also be noted.

Response: *Local noise regulations are listed in Volume III, Section 4.2.4 of the DEIS/R (page 4-9).*

MA 2-5.17

Comment: Pg. 4-24: (4.6.3 Energy Impacts)

- This section does not discuss the future anticipated deficit in power production, which is discussed in the Energy Appendix.
- The total energy consumption

figures (Btus/year) in the text (paragraph 2) are significantly inconsistent with the figures in Table 4.6-3.

Response: *The future anticipated capacity shortfall was encountered during the projection of the total electricity demand and power plant capacity. However, this shortfall did not affect the analysis because the projected demand from the electrification project would be only a tiny fraction of the overall regional demand. Therefore, the anticipated deficit was not quantitatively used in this analysis and consequently not incorporated in Section 4.6 of the DEIS/R.*

The inconsistencies in the reporting of energy consumption figures have been corrected in the FEIS/R.

MA 2-5.18

Comment: Pp. 4-31-32: The Blue Hill Drive/Rt 128 and Blue Hill/University Avenue intersections are not located in Boston, but rather in Dedham (Tables 4.9-2A to 2D inclusive).

Response: *This error has been corrected in the FEIS/R.*

MA 2-5.19

Comment: Pg. 4-66: (Table 4-17) - What is the basis for the significant reductions in peak hour traffic volumes at South Station (Summer Street and Atlantic Avenue)? Data in the Central Artery/Tunnel FEIS do not indicate this (considerably smaller reduction in the a.m. peak, increase in the p.m. peak).

Response: *The Central Artery/Tunnel project traffic counts at the Atlantic Avenue/Summer Street intersection listed the total number of vehicles entering the intersection during the AM and PM peak hours. The traffic counts in Table 4-17 of the Northeast Corridor DEIS/R, however, listed the total number of vehicles on each leg of this intersection (including traffic both entering and exiting the intersection). There is no simple way to compare the two different types of traffic counts. After reviewing the two sets of*

traffic counts with MHD, the numbers are not inconsistent.

MA 2-5.20

Comment: Pg. 4-82: A page (?) is missing - Sect. 4-4.6.1.

Response: *The page containing the section noted was inadvertently absent from the final document. However, Volume III of the DEIS/R is not being reissued.*

MA 2-5.21

Comment: Pp. 9-32-9-33: (Tables 9-22A-D inclusive) - the Blue Hill Drive/Rt. 128 and Blue Hill Drive/ University Avenue intersections are located in Dedham, not Boston.

Response: *Table 4.9-5 in the FEIS/R has been corrected per this comment.*

MA Historical Commission

MA 2-6.1

Comment: The identification of historic resources located along the railroad right-of-way through Boston is incomplete.

Response: *All the historic properties cited have been evaluated in a supplement to the Technical Report provided to the SHPO and BLC; these evaluations are incorporated into the FEIS.*

MA 2-6.2

Comment: There is not sufficient information provided in the Draft EIS/R for the MHC to be able to concur with findings or recommendations in the Draft EIS/R with regard to archaeological resources which may be affected by the project.

Response: *A supplemental report was submitted to MHC in March 1994. MHC now concurs with the findings of the FEIS/R as it relates to historic and archaeological resources and has entered into a Memorandum of Agreement with FRA outlining the potential effects and mitigation to be incorporated into the project.*

MA 2-6.3

Comment: In addition, the MHC wishes to express its dismay at the publication of

archaeological site locations in violation of state and federal laws. Any subsequent Draft or Final EIS/R's should not include maps showing site locations.

Response: *This information was inadvertently included in the DEIS/R and has been removed from the FEIS/R.*

MA Dept. of Food & Agriculture

MA 2-7.1

Comment: The description of the area at the site of the Attleboro PS in Vol III, p. 11-61, suggests an old field which is no longer active. The areas in Mansfield are not considered agricultural resources.

Response: *This error has been revised in the FEIS/R.*

Dedham-Westwood Water District

MA 2-8.1

Comment: I am concerned that the existing and proposed public water supply wells of the Dedham-Westwood Water District are not mentioned or included in tables or charts. For example, in Volume III, section 1.2.1.34 describing Westwood, the public well sites (4) are not included in the area listing sensitive receptors. In section 1.2.1.35 describing Dedham, there is no mention of the proposed Fowl Meadow well which has been granted all of the necessary permits and construction is planned for the near future.

Response: *The four public water supply wells of the Dedham-Westwood water district described in this comment occur outside the existing right-of-way in the vicinity of the Fowl Meadow and Ponkapaog Bog ACEC. The water district property does abut the rail line and three of the four wells occur close enough to the right-of-way that the Zone 1 or well head protection area overlaps the rail line. Listed in Table 4.122-2 as a sensitive resource, potential for impacts at these sites is limited since no facilities are proposed in the area. Best Management Practices for working in an aquifer will be employed in conjunction with catenary pole installation including sedimentation and erosion control measures and stormwater runoff management.*

MA 2-8.2

Comment: There is no mention of the existing wells [near the Route 128 Station] that supply two thirds of our public water supply.

Response: This error has been corrected in the FEIS/R.

Dept. of Environmental Mgt.

MA 2-9.1

Comment: Specifically, we are requesting access for hikers to pass underneath I-95 along the edge of the train ROW.

Response: *The Northeast Corridor rail line in Massachusetts is owned by the MBTA. The availability of the right-of-way for access by hikers is an issue that must be addressed by the MBTA. Amtrak can accommodate any decision reached by the MBTA on this issue.*

MA Historical Commission

MA 2-10.1

Comment: The MHC concurs with the archaeologist's recommendations for additional studies at the Attleboro Paralleling Station and the East Foxboro Paralleling Station and therefore requests that an intensive (locational) survey (950 CMR 70) be conducted.

Response: *See response to Comment MA 2-6.2.*

MBTA

MA 2-11.1

Comment: We believe that these transportation benefits [reduced running time, environment-friendly, and probability of electrification of commuter rail service] should be identified in the FEIS/R.

Response: *These potential benefits have been addressed in Volume I, Chapter 2 and Section 4.9 of the FEIS/R.*

MA 2-11.2

Comment: Table 4.9-1 indicates that there will be no adverse operating effects on commuter railroads on the Northeast Corridor. [However,] train performance calculations have indicated that both increased speeds and increased train volumes will necessitate timetable and/or physical plant changes to accommodate

compatibility with the exiting MBTA commuter service in Massachusetts. The MBTA may have to acquire additional diesel powered locomotives so that commuter trains will be powered by two locomotives.

Response: *Chapter 5 includes measures that would mitigate the impact of the Proposed Action on commuter service. This comment also addresses capacity constraints that would result from increasing levels of use of the NEC by intercity and commuter service. Such conflicts are not a result of the Proposed Action per se, but of NECIP as a whole and of MBTA's own plans. The Northeast Corridor Transportation Plan has identified additional measures to be incorporated into NECIP to address impacts resulting from rail traffic growth.*

MA 2-11.3

Comment: The Southwest Corridor project made allowances of the Amtrak substation, as well as constructing a substation for the Orange Line at this location. However, maximum load could be much higher than the transformer rating. Transformers should be sized for Amtrak and future commuter maximum traffic loads, which should be considered in the calculations.

Response: *Amtrak's electrification design is sized to accommodate the MBTA's Year 2010 on-corridor traffic between South Station and Providence.*

MA 2-11.4

Comment: Electric field intensity for 115 kV overhead and underground connections to electric utilities should be estimated also.

Response: *While magnetic fields are capable of penetrating most materials and structures (DEIS Volume III, Section 5.6), electric fields are readily attenuated by both natural and manmade materials and structures (including the ground, trees, houses, train cars, and the human body). Since electric fields do not readily penetrate objects, it is the magnetic field component rather than the electric field component of exposures that is of concern regarding potential health effects (DEIS*

Volume III, Section 5.4.3). For this reason, only magnetic fields were investigated for the DEIS.

MA 2-11.5

Comment: Paragraph 5.6, page 5-35, and Paragraph 5.4.1.1, page 5-12 of Volume II: Please note that the Boston side of the Roxbury substation does not utilize auto transformers and negative feeders. This should be corrected.

Response: *Comment noted, however, the design and arrangement of electrification facility components is beyond the scope of this EIS/R.*

MA 2-11.6

Comment: Table 5-3 on page 5-18 of Volume III: MBTA employees should be considered as an occupational category for EMF exposure. Employees who work along the ROW or at stations will be exposed to EMFs. Employees who work along the ROW or at stations will be exposed to EMFs at the same level as Amtrak employees. Employees on the diesel driven trains will be exposed to EMFs when an Amtrak train draws current within the same electrical section.

Response: *Agreed. Table 3.5.2 identifies those categories of EMF exposure that are projected for all rail employees, including MBTA employees.*

MA 2-11.7

Comment: Technical Study 8: Public Safety, Volume III page 8-1: This study does not include system grounding, which is a very important safety issue for the electrified system.

Response: *System grounding is one of the mitigating measures included in Section 5.1.1(e).*

MA 2-11.8

Comment: Technical Study 5: Volume III - Paragraph 5.5.6, page 5-32: It is not clear why test results are so inconsistent. This should be explained more fully.

Response: *As discussed in Volume III of the DEIS, Section 5.4.1, electromagnetic fields are dynamic and directly related to the*

magnitude of nearby electric currents. In addition EMFs from various sources and locations can interact with each other (Section 5.6). Due to the complexity (eg., number of potential sources) under which EMFs are created and due to the rapid decay of EMF over short distances, field strengths will vary significantly from location to location in the same general vicinity.

ERM's measurements were collected approximately 18 inches from the side of the train. This distance is substantially nearer to the electrical circuitry of both the train and the track than measurements taken by WESTON (15 to 65 feet). Therefore, the distance from the track will most likely be the cause of the large differences in magnetic field strengths. The DEIS does conservatively conclude, based on field measurements, that exposure levels for passengers waiting at stations could potentially range from 16 to 209 mG.

MA 2-11.9

Comment: Paragraph 5.5.8, page 5-35 - volume III: Electromagnetic interference should be designed so that it does not affect nearby utilities.

Response: *See response to Comment MA 2-11.7.*

MA 2-11.10

Comment: Technical Study 4 - Noise and Vibration: Pages 4-52 and 4-77 state that the X-2000 has been in service only one month. Is this true, or was this train set in revenue service in Sweden for some time before being modified for the tests here?

Response: *The X-2000 demonstrated in the U.S. in 1993 was a new trainset.*

MA 2-11.11

Comment: The X-2000 and other modern high speed trains should be investigated in their "natural habitat" to see if a "degradation factor" should be applied, and what it should be.

Response: *The FEIS/R uses a range of noise and vibration levels that would include any degradation of those measured during the*

X-2000 and ICE demonstrations in the U.S. Chapter 5 requires establishment of an ongoing noise and vibration monitoring program that will permit the long term evaluation of the high-speed equipment actually acquired by Amtrak. It is this monitoring program, rather than projections, that will be used in determining when and where noise and vibration mitigation will be developed.

MA 2-11.12

Comment: Service will probably utilize a single high horsepower locomotive. This should be utilized for the noise analysis.

Response: *The configuration of future Amtrak high-speed equipment is unknown at this time. The noise and vibration analysis was based on conservative assumptions of train size and configuration -- express trains consisting of one locomotive and eight cars and conventional trains consisting of two locomotives and 18 cars. As a result, the projected noise impact from the Proposed Action is conservative, i.e., it most likely overstates the level of impact.*

MA 2-11.13

Comment: While this [conventional trains of two locomotives and eighteen cars] might have been used for some power studies, we doubt that this is a realistic scenario for actual service. For one thing, the platforms are not long enough for such a long train (Route 128 and Back Bay have twelve car platforms). Also, the express trains would be so popular that there would not be a need for eighteen car conventional trains.

Response: *The study used a train consist of 2 + 18 because it was the most conservative configuration possible. This configuration is the design limit of the electrification system. Even though Amtrak does not expect to run trains this large, it provided a consistent and conservative figure for impact analysis.*

MA 2-11.14

Comment: More frequent track maintenance will be necessary.

Response: *Agreed. FRA establishes minimum standards for the condition of track at specific speeds and Amtrak is under an obligation to maintain its track in at least this condition. FRA safety inspectors periodically inspect the track to ensure Amtrak's compliance. Amtrak, for its part, has shown on its existing high-speed track in the Washington to New York City segment of the NEC, that reliable maintenance of track to higher standards is achievable.*

MA 2-11.15

Comment: Therefore, we recommend that the DEIS/R contain recommended mitigations to help reduce noise levels which will assure a better quality of life for the abutters. This project should be responsible for all required noise mitigation that has been identified.

Response: *Volume I, Section 5.1.1(d) discusses the noise mitigation program to be incorporated as part of this project. Since Amtrak shares the NEC in Massachusetts with the MBTA which runs more trains, noisier trains and trains later at night than Amtrak, mitigation of high-speed intercity noise on this segment of the NEC would make little sense unless MBTA noise is also mitigated. Therefore, Amtrak will work cooperatively with the MBTA to develop a noise and vibration mitigation program for the NEC in Massachusetts and Amtrak will assist MBTA in funding its implementation.*

MA 2-11.16

Comment: We feel it is extremely important that all of the right-of-way near residences be fenced in Massachusetts....We feel that the DEIS/R has understated the right-of-way fencing requirement and it needs to be strengthened.

Response: *Volume I, Section 5.1.1(h) identifies the location of fencing that would be implemented as part of this project. In Massachusetts, Amtrak will also work cooperatively with the MBTA to develop a comprehensive fencing program that meets the needs of both commuter and intercity operations and will assist MBTA in funding its implementation.*

MA 2-11.17

Comment: We feel the DEIS/R should provide all physical plant changes that will protect the commuter service when high-speed service commences.

Response: *Potential impacts to current and future commuter rail services are discussed in Volume I, Section 4.9 of the FEIS/R.*

MA 2-11.18

Comment: In Massachusetts, we are using the dimension 20'8" because of double stack cars existing that result in this need.

Response: *It is the finding of this study that a clearance of 20'6" is adequate for the safe operation of double stack freight cars. However, this comment is noted.*

MA 2-11.19

Comment: Perhaps the addition of statements indicating potential mitigations for any adversities imposed upon freight carriers would indicate an interest in providing relief.

Response: *The issue of the proposed project's impact on freight rail service and the appropriate mitigation of this impact is discussed in Volume I, Section 5.1.1(b) of the FEIS/R. Also see response 3.3 in this volume.*

MA 2-11.20

Comment: We feel the DEIS/R should offer mitigation in the way of added trees or shrubbery that would help the aesthetics of the structures.

Response: *Volume I, Section 5.1.1(k) identifies measures to mitigate visual impacts in non-historically sensitive areas. Amtrak will consult with appropriate local agencies to determine appropriate screening for its fixed facilities (substations, switching stations and paralleling stations). Catenary poles will also be sited, to the extent practicable, to minimize intrusion into sensitive views. In historically sensitive areas, the SHPOs will review the placement and color of catenary poles.*

MA 2-11.21

Comment: Volume III - Technical Studies (page 9-

15): Amtrak operates station building on outbound side at Route 128 station; the current parking fee is \$1.00 not \$3.00 and Greenlodge Street parking is free. The MBTA does not own the land.

Response: *This error has been revised in the FEIS/R.*

MA 2-11.22

Comment: This kind of traffic generated by the service is probably difficult to forecast but should be considered by the planning process.

Response: *The DEIS/R indicates that projected travel in the Northeast Corridor is expected to increase by about 3.6 million trips in 2010. This results primarily from projected increases in corridor population and employment. Given that high-speed service by air presently exists in this corridor, the DEIS/R indicates that high-speed rail service is more likely to divert passengers from air to rail, rather than generate substantial new travel.*

MA Executive Office of Trans. & Const.

MA 2-12.1

Comment: This writer supports the project.

Response: *Comment noted.*

Boston Transportation Dept.

MA 2-13.1

Comment: Amtrak should work with residents and appropriate city agencies to develop a comprehensive program to mitigate noise and vibration impacts in the affected areas.

Response: See response MA 2-11.15.

MA 2-13.2

Comment: What alternatives to the Roxbury Crossing site were considered? What will the impacts be, during construction and during operation? How will Amtrak mitigate the impacts of this facility?

Response: *See response to Comment MA 1-9.1.*

MA 2-13.3

Comment: The report should explain the impacts of the Readville paralleling station in more

detail. According to Table 5.2-1, six homes will be exposed to noise from this facility. The report should provide more detail about the impacts of this facility and the proposed mitigation measures.

Response: *Discussion of the noise impact of the Readville paralleling station and mitigation measures is contained in Volume I, Sections 4.4.4 and 5.1.1(d) of the FEIS/R.*

MA 2-13.4

Comment: Given the growing importance of this station [Route 128 Station] in the regional transportation network, the proponent should demonstrate a stronger commitment to increasing the parking supply at this location.

Response: *See response to Comment MA 1-4.1.*

MA 2-13.5

Comment: The FEIS/R should analyze pedestrian traffic at these locations and propose mitigation measures as appropriate.

Response: *Volume I, Section 4.9 of the FEIS/R presents a revised discussion of Amtrak pedestrian traffic in the areas of South Station and Back Bay.*

MA 2-13.6

Comment: (Analysis of the) impacts at the intersection of Dartmouth Street and Columbus Avenue is missing.

Response: *In a letter from the Massachusetts Executive Office of Environmental Affairs dated November 2, 1992, the analysis of this intersection was deleted from the EIR scope because the additional traffic information showed a total of 18 trips during the peak hour.*

MA 2-13.7

Comment: In addition, the intersections around Route 128 Station are not in Boston, but in the Westwood/Dedham area. Subsequent reports should make this correction.

Response: *This error has been corrected in the FEIS/R.*

MA 2-13.8

Comment: Amtrak should develop a program to mitigate the impacts of this project on freight rail traffic.

Response: *See Response 3.3 in this volume and response to Comment MA 2.2.4.*

MA-DEP

MA 2-14.1

Comment: It is noted in the EIR that none of these appurtenances will impact wetlands. However, it is unclear whether building or maintaining these structures will require constructing access/maintenance roadways or installing supplemental electrical lines near or through wetlands.

Response: *Access to the appurtenances are shown in the site plans located in Appendix A of Volume I of the FEIS/R. No construction or maintenance access will require use of any wetlands.*

MA 2-14.2

Comment: The project proponent also is advised that contaminated soil frequently occurs along railroad lines. Removing contaminated soil, pumping contaminated groundwater, or working in contaminated media must be done under the provisions of MGL c.21E/21C and OSHA.

Response: *Comment noted.*

MBTA

MA 2-15.1

Comment: How many more people will be using the station at Route 128 to access Amtrak's service?

Response: *Ridership forecasts completed by Charles River Associates for the DEIS/R indicate that in the year 2010 Route 128 Station will be used annually by approximately 933,250 Amtrak intercity passengers.*

MA 2-15.2

Comment: Are the current parking facilities at Route 128 adequate to handle this demand, or should new parking be developed? If so, to what extent and what are the impacts of this new parking (e.g., wetland impacts, surface water drainage and runoff, etc.)?

Response: See response to Comment MA 1-4.1.

MA 2-15.3

Comment: What impacts will the increased usage at Route 128 Station have on local traffic? This always should include all trips including customers who park, kiss and ride, etc. Is traffic mitigation on local roads necessary? If so, to what extent and which types?

Response: *The development of additional parking at the Route 128 Station will be evaluated in future in a separate, expanded environmental process that will provide in-depth analysis of traffic impacts to local streets. However, a January 1991 report prepared by Goody, Clancy & Associates, Inc., entitled "Parking Area and Station Improvements: 128 Dedham Westwood (Phase 1A - Conceptual Design) included a traffic analysis related to the expansion of parking at the Route 128 Station indicating that more than two-thirds of the station-traffic will access the station via Route 128/Interstate 95.*

MA 2-15.4

Comment: What effects will increased service have on the corridor, and anticipated new riders at the station have on local air quality? This analysis should look at car exhaust emissions as well as off road emissions. Is any air quality mitigation or management plan necessary?

Response: *The calculations of air quality impacts at stations are presented in Volume I, Section 4.10 of the FEIS/R. The technical support data for these calculations may be found in Volume II, Section 7.4 of the FEIS/R.*

City of Boston Environmental Department

MA 2-16.1

Comment: Thus, rural areas of the corridor with existing noise levels of <44 dBA L_{DN} will qualify for noise mitigation for project-related noise impacts at no higher than 59 dBA L_{DN} , while urban dwellers, already subject to L_{DN} levels typically around 65 dBA, will not qualify as "adversely impacted" by project-specific noise until ambient levels reach 70 dBA L_{DN} . The

Environment Department recommends adoption of an absolute residential performance standard of 65 dBA L_{DN} (HUD already uses this standard), with noise levels above this level requiring mitigation automatically. For background levels of noise already in excess of 65 dBA L_{DN} , the Environment Department recommends adoption of a "no net increase" policy, where mitigation would entail no less than maintaining current L_{DN} levels. The FEIS/R should apply this absolute standard to the corridor, and document any residences which would qualify for noise mitigation under this new standard.

Response: *The Northeast Corridor has been actively carrying inter-city, commuter and freight rail traffic for many years. Because the electrification project involves only changes in train noise, rather than the introduction of a new source in the communities along the corridor, the noise impact criteria are based on the projected increase in cumulative noise level relative to the existing noise environment. The criteria allow less of a noise increase in already noisy areas than in areas with lower existing noise levels. In terms of L_{dn} , the existing noise exposure at noise-sensitive locations near the corridor is dominated by train noise, and thus the differences in existing noise levels are based on differences in train operating conditions rather than whether the area is urban or rural. Regarding the criteria, it would not be appropriate to use an absolute noise mitigation criterion of 65 dBA L_{dn} for this project. This HUD standard applies to locations for the construction of new housing rather than to a change of conditions for existing housing. In addition, this level is already exceeded at so many locations that noise barriers would likely be required along much of the 160-mile corridor (on both sides) between New Haven and Boston, even before the effects of this project are considered. Furthermore, a "no net increase" policy in areas with noise levels in excess of 65 dBA L_{dn} is not practical since any project-related increase in train speed or frequency of operation, no matter how slight, would be deemed to*

cause significant noise impact in such areas. For these reasons, potential noise mitigation for the project is based on the noise impact criteria used for the DEIS/R. These criteria are consistent with those used by the Federal Transit Administration and Federal Highway Administration.

MA 2-16.2

Comment: The FEIS/R should report on the status of all mitigation funding commitments. If the proponent decides to make wide scale use of noise barriers, the FEIS/R should discuss possible negative visual impacts along urban corridors. The proponent should consult with appropriate local agencies along the corridor to develop the mostly visually unintrusive noise mitigation possible.

Response: *With regard to noise barriers, Amtrak will consult with appropriate local agencies and adjacent property owners on the design and siting of these barriers. With regard to funding commitments, mitigation of impacts associated with this project will be funded from appropriations already made for NEC electrification and will be installed prior to the commencement of electric operation. Mitigation of impacts associated with traffic increases resulting from NECIP as a whole, growth in MBTA commuter service or growth in freight service, has been incorporated into the Northeast Corridor Transportation Plan. Amtrak's share of the cost of such mitigation will come from future appropriations made by Congress.*

MA 2-16.3

Comment: The FEIS/R should present more detail on noise mitigation at substations and paralleling stations, and should outline what steps the proponent intends to implement to prevent low frequency puretones.

Response: *Volume I, Section 5.1.1(d) of the FEIS/R discuss potential noise impacts and appropriate mitigation. A summary of this information is included at the beginning of Volume III.*

MA 2-16.4

Comment: The proponent should commit to keeping residents informed about the scheduling, duration, and extent of construction-related noise impacts.

Response: *Comment noted. Section 5.1.1(d) requires Amtrak to establish a community liaison program to ensure local residents are kept informed of construction activities and have a means to register complaints.*

MA 2-16.5

Comment: The FEIS/R should discuss appropriate mitigation for nighttime construction activities.

Response: *Volume II, Section 9.1 of the FEIS/R present an updated discussion of nighttime construction activities and Volume I, Section 5.1.1(d) discusses mitigation.*

MA 2-16.6

Comment: The FEIS/R should outline those properties for which use of ballast mats will not provide adequate mitigation, and should commit to alternate forms of mitigation as needed.

Response: *The vibration mitigation provisions in Section 5.1.1(d) do not recommend specific measures, but rather directs Amtrak to use effective mitigation and suggests some specific measures used in transit systems overseas. Recognizing that mitigation of vibration from high-speed rail systems is a relatively new area of design with limited experience in North America, Amtrak will undertake a vibration mitigation test program to identify those measures that would be the most effective in the context of this project.*

MA 2-16.7

Comment: The FEIS/R should better quantify the environmental impacts of these potential changes in freight operations, and should propose methods of reducing the negative impacts.

Response: *The environmental impacts of potential changes in freight operations has been*

included in the FEIS/R, Volume I, Sections 4.2, 4.6, 4.9, and 4.10. Measures to mitigate the potential impact on freight rail operations are included in Section 5.1.1(i). By incorporating these measures into the project plan, no adverse impact on freight operations is anticipated.

MA 2-16.8

Comment: The FEIS/R should analyze reducing train speeds from Readville to Back Bay, and how this safety measure would impact the programmatic goals of fast travel to New Haven/New York.

Response: *As discussed in response to comment MA 2-5.9, Amtrak develops the maximum allowable speeds on its rail line based upon a number of factors. Amtrak will need specific approval from FRA to operate at speeds in excess of 110 mph. In FRA's review of Amtrak's proposed operation at these higher speeds, FRA will consider all the relevant safety aspects of railroad safety associated with the operation.*

MA 2-16.9

Comment: The FEIS/R should outline measures to ensure against illegal entry onto the tracks. Also, if the FEIS/R proposes safety fences, it should discuss the impact of these fences on wildlife habitat and recreational use in open space along the corridor, as well as the visual impacts of the fences on the character of the surrounding areas. The Environmental Department has particular concerns with negative impacts on the urban wild area between Dale St./Metropolitan Ave and West St. in Hyde Park.

Response: *Any fencing has the potential to become a problem to wildlife, especially big game, if it restricts access to food and water or causes physical injury through entanglement. The fencing proposed for the NEC project is generally chain-link or a woven-wire construction which would reduce the potential for direct injury.*

The restriction of movement across tracks and access to the available habitats would not be expected to impact existing

wildlife habitats since the proposed fencing is limited to sensitive receptors such as schools or illegal pedestrian crossings. The areas to be fenced have also been reviewed for their habitat value. Based on this analysis, appropriate measures, such as shortening overall length or restricting fencing to one side of the tracks, have been incorporated into the recommended fencing locations. Therefore, new fencing would not be expected to impact the overall wildlife habitat values.

In Massachusetts, no new fencing is proposed for the Fowl Meadow and Ponkapoag Bog area, an Area of Critical Environmental Concern. Locations for which fencing has been proposed include an industrial area of Hebronville, in Attleboro, and the Garden Street area of Sharon. The latter site is a residential area, and although a large wetland complex is located to the south, the fencing is not expected to restrict wildlife access in the wetland area.

A short segment of fence is also proposed for Summer Place/Morse Place in East Foxboro, an illegal pedestrian crossing. This site is associated with the Canoe River Area of Critical Environmental Concern, and any fencing associated with this crossing area will be minimized as much as practicable.

No new fencing is proposed for the Metropolitan Avenue/Dale Street area. However, repairs are proposed for damaged areas of fencing.

MA 2-16.10

Comment: The report fails to mention that the proposed substation lies within several hundred feet of numerous sensitive receptors, including a densely developed public housing complex, the Southwest Corridor Park, and three schools (Roxbury Community College, Madison Park High School, and the Tobin Elementary School). In addition, the Vienna Brewery Complex, recommended for National Register listing as a part of the Stony Brook Breweries Thematic Nomination, abuts the proposed

substation site at 37 Station Street and 133 Halleck Street.

Response: *Volume I, Section 4.3.2 of the FEIS/R has been revised to provide an expanded discussion of the siting of this substation, including the visual effects of this facility on the former Vienna Brewery property.*

MA 2-16.11

Comment: The FEIS/R should identify alternative sites for the substation or provide justification for the proposed location.

Response: *See response to Comment MA 1-9.1.*

MA 2-16.12

Comment: Despite the large projected increases, the DEIS/R does not include any pedestrian level of service or desire line analyses.

Response: *Although pedestrian desire lines are not illustrated, Volume I, Section 4.9 of the FEIS/R presents a revised discussion of Amtrak pedestrian traffic in the area of South Station.*

MA 2-16.13

Comment: The FEIS/R should identify adverse impacts to the Southwest Corridor Park and propose mitigation measures as appropriate.

Response: *No new construction or fencing is proposed for the vicinity of the Southwest Corridor Park area, other than catenary pole installation. Wildlife impacts would be expected to be limited in this environment since the primary resident species are small mammals and songbirds.*

MA 2-16.14

Comment: The FEIS/R should discuss the impacts of the project on these resources and develop a comprehensive mitigation plan.

- Haleyville District (1123-1165 & 1128-1172 Hyde Park Ave. & 74-78 Harvard Ave. abutting the rail corridor), recommended for National Register District listing.
- Webster Square District (River, Webster & Everett Sts., Central and Dell Aves.), recommended for

National Register District listing.

- Dedham Manufacturing District (1576-1608 River St., Knight St., Damon Pl. & Readville St.), recommended for National Register District listing.
- B.F. Sturtevant Company (Damon Street), recommended for individual National Register listing.
- Christ Church (1220 River Street), recommended for individual National Register listing.
- Hyde Park Public Library (35 Harvard Avenue), recommended for individual National Register listing.
- Woodbourne District (Southbourne Road, Florian & Wachusett Sts.), recommended for National Register District listing.
- Sumner Hill District (bounded by Green, Sedgewick, South & Centre Sts. & the Southwest Corridor), listed on National Register.
- Glenvale Park (Cheshire & Lamartine Sts, Chestnut Ave. & Marlou Ter.), recommended for National Register District listing.
- Green Street Manufacturing District (Green St. & Brookside Ave.), recommended for National Register District listing.
- Hyde Square District (Centre, Wyman, Forbes, Sheridan, Cranston, Paul Gore & Danforth Sts. & Chestnut Ave.), recommended for National Register District listing.
- Haffenreffer Brewery (Germania Street), listed on National Register.
- Parker Hill/Mission Hill North Slope District (Tremont, Burney, Alleghany, Terrace & Hillside Sts., Delle & Folsom Aves.), recommended for National Register District listing.

- Stony Brook Breweries Thematic Nomination (31 Heath St., 31 New Heath St., 156-158 Terrace St., 55 Heath St., 125 Halleck & 37 Station Street, 133 Halleck Street), recommended for National Register listing.

Response: *All the historic properties cited have been evaluated in a supplement to the Technical Report provided to the SHPO and BLC; FRA and the SHPO have entered into a memorandum of agreement pursuant to Section 106 of the National Historic Preservations Act addressing the protection of all historic resources in the vicinity of this project.*

Citizens Trans. Action Campaign

MA 3-1.1

Comment: This writer endorses the project.

Response: *Comment noted.*

Neponset River Watershed Association

MA 3-2.1

Comment: In fact, the route passes through several such areas. In Dedham and Canton approximately one mile north of route 128 the ROW passes through an area of **rare species occurrence**.

Response: *The Massachusetts Natural Heritage and Endangered Species program reviewed this project file and noted that the rare species which were listed in the Fowl Meadow and Ponkapoag Bog area of the Northeast Corridor rail line will not be adversely affected by the proposed work, as it occurs within the railroad right-of-way.*

MA 3-2.2

Comment: In the section between Route 128 and Route 95 the ROW passes through an area designated as **estimated habitat for rare wetland life**. To the best of my knowledge these areas are not addressed in the current EIR. I would refer you to the Mass GIS office and DEP's ACEC program for more information on these areas.

Response: *See response to Comment MA 3-2.1.*

Friends of the Blue Hills

MA 3-3.1

Comment: The railroad electrification involves construction work immediately adjacent to valuable wetlands in the Fowl Meadow which is an Area of Critical Environmental Concern, the public water supply of several towns, and an MDC Reservation.

Response: *No new construction or fencing is proposed for the Fowl Meadow and Ponkapoag Bog ACEC area other than catenary pole installation. The review process has included meetings with, and input and review by the Area of Critical Environmental Concern Office director, Leslie Luchionic.*

Potential impacts to rare species identified in the Fowl Meadow and Ponkapoag Bog ACEC have been reviewed by the Massachusetts Natural Heritage and Endangered Species Program. Their response has noted that these rare species will not be adversely affected by the proposed work, as it occurs within the right-of-way.

Mitigation of impacts resulting from installation of the catenary structures will focus on the utilization of proper erosion and sedimentation control measures. These measures can include but are not limited to silt fencing, haybales, dust control during construction activity, dumped stone and revegetating areas where appropriate.

MA 3-3.2

Comment: At two places in the Neponset River Reservation the tracks are very close to the banks of the Neponset River, and several endangered species have been identified in the area. The wetlands are on both sides of the right of way, and in fact, if this railroad line did not already exist, it is doubtful that it could be built there under today's standards.

Response: *See response to Comment MA 3-3.1.*

MA 3-3.3

Comment: The mitigation measures outlined in the report call for construction access only by

the tracks which requires that the work be performed only at night. While this is a very necessary measure, it means that work in this critical area will take place under the cover of darkness, compounding the usual problems of oversight during the construction process. We feel that an environmental monitor must be required under such circumstances.

Response: *Amtrak has hired the services of an environmental consulting and compliance firm to help it ensure that work performed by its contractors and by Amtrak forces meets the requirements of local, state and federal environmental laws and regulations. Amtrak reports that it intends to be especially vigilant in environmentally sensitive areas and will provide the oversight necessary to prevent non-compliance with environmental laws. FRA will also have contractors reviewing Amtrak's compliance with mitigation outlined in Chapter 5 of Volume I. As a consequence, a separate environmental monitor would be redundant.*

Committee for Regional Trans.

MA 3-4.1

Comment: This writer endorses the project.

Response: *Comment noted.*

Archdale Community Center

MA 3-5.1

Comment: Amtrak has shown by past experience that they are not willing to commit to providing the protection needed to ensure the safety of all residents.

Response: *Potential impacts to public safety and mitigation are discussed in Volume I, Sections 4.8 and 5.1 of the FEIS/R.*

Roxbury Neighborhood Council

MA 3-6.1

Comment: It is our further understanding that electromagnetic fields generated by such a substation presents significant health hazards to humans and other living matter within its range.

Response: *Volume I, Sections 3.5 and 4.5 of the*

FEIS/R present an updated discussion of the EMF issue. Also see Response 3.5 in this volume.

Conrail

MA 3-7.1

Comment: This writer has no comments.

Response: *No response required.*

Neponset River Watershed Association

MA 3-8.1

Comment: We would like to know more about the widening of the area of the tracks and the reconstruction of bridges, such as the Canton Viaduct.

Response: *The electrification proposal does not require either the widening of tracks or the reconstruction of the Canton Viaduct. Catenary poles would be attached to Canton Viaduct and are covered in the memorandum of agreement between the SHPO and FRA.*

MA 3-8.2

Comment: Will they continue to protect the tracks and the neighborhoods from flooding? Will the water supply be affected?

Response: *Flooding is discussed in Volume I, Section 4.12 of the FEIS/R. The extent of work within the Neponset River watershed is limited to the existing right-of-way, except for the Canton paralleling station in Sharon and the Readville switching station in Hyde Park.*

No impacts to wetland acreage or functional values are proposed or expected. Similarly, no change in existing flood status or water supply would be expected to occur as a result of the work in the watershed.

Chester Park Neighborhood Association

MA 3-9.1

Comment: By recorded vote, Chester Park Neighborhood Association directs me to notify you of our alarm at the negligence on the part of Amtrak New York to Boston Improvement Project in not holding any community meeting within the boundaries of Roxbury regarding potential environmental impact of a

proposed electrical substation at or near Roxbury Crossing.

Response: *Comment noted. MEPA coordination sessions were held in this area on January 12 and 13, 1994.*

Chester Park Neighborhood Association

MA 3-10.1

Comment: To my knowledge, neither Amtrak nor its environmental consultants has yet scheduled a meeting in Roxbury to inform that community regarding the impact of electrification.

Response:

Conservation Law Foundation

MA 3-11.1

Comment: The discussion of measures to mitigate the impact of the project on freight rail is inadequate.

Response: *This discussion has been expanded in the FEIS/R. Volume I, Sections 4.2 and 4.11 discuss the impacts of the proposed project on freight rail and Chapter 5 details mitigation measures which would mitigate freight these impacts.*

MA 3-11.2

Comment: The FEIS should include an analysis of the project's impact on carbon dioxide emissions.

Response: *Under the Massachusetts State implementation Plan, carbon dioxide (CO₂) from transportation projects is not considered to be a pollutant with demonstrable adverse health effects. Therefore, no assessment of CO₂ is necessary.*

MA 3-11.3

Comment: The mitigation measures discussed to counter the noise impacts due to electric train operation should be implemented.

Response: *Comment noted.*

MA 3-11.4

Comment: The discussion of alternatives should consider the availability of tilt-train and other very high speed train technology.

Response: *The extension of electric traction is consistent with the implementation of advanced high-speed rail technologies which all use this form of power. The actual trainset design will be determined in Amtrak's high-speed equipment procurement process. Most of the prequalified teams involved in this procurement have access to advanced tilt suspensions; therefore, it is likely that "tilt" capability will be incorporated into the design of this equipment.*

Barry M. Steinberg

MA 4-1.1

Comment: How many decibels are there near a substation/switching station/paralleling station? Also, it might be useful to compare the number of decibels to a number that is recognizable, e.g., a gasoline-powered lawn mower at 10 feet.

Response: *Estimates for the proposed electrical stations, without noise mitigation, indicate noise levels in the range of 55 dBA to 60 dBA at a distance of 100 feet from the center of the facility. As a reference, this noise level is comparable to a gasoline-powered lawn mower at a distance of 250 feet; the same lawn mower at 10 feet would cause a noise level of about 85 dBA, sounding roughly 8 times as loud. At distances greater than 100 feet from the electrical stations, noise levels would be reduced by about 6 decibels for each doubling of distance from the facility. Where noise mitigation treatments are applied, electrical station noise levels will be even lower.*

MA 4-1.2

Comment: Table 3.9-2. Existing annual Amtrak and Commuter ridership.

Response: *This error has been corrected.*

MA 4-1.3

Comment: Table 3.9-5 is most misleading in that "existing supply" is used by commuters (and most likely is inadequate) -- as mentioned on p. 4-30 and 5-17.

Response: *Comment noted.*

MA 4-1.4

Comment: Page 3-22. Projects that...are required to be permitted. Replace with "require permits." Next sentence "the permitting process" replace by "the permit process."

Response: *This error has been corrected.*

MA 4-1.5

Comment: Grammatically: In all cases, there is no such thing as more than one "alternative" to the option in question. All choices are options.

Response: *Comment noted.*

MA 4-1.6

Comment: P. 4-28. Table of Annual Trips (in millions).

Response: *This error has been corrected.*

MA 4-1.7

Comment: I couldn't find many of the details citations to letters/books as referred to in the text, e.g., p.4-28 "LOGIC, 1993".

Response: *This error has been corrected.*

MA 4-1.8

Comment: p. 5-1. 5.1, line 1 "Although DISCRETE elements." "Discreet" is an unrelated word.

Response: *Comment noted.*

MA 4-1.9

Comment: p. 5-1. What is the likely effect of the project on airline and bus line employment?

Response: *Some modest reduction on airline employment might occur as a result of diversion of air travelers to improved rail service, although this is likely to be very limited. Ridership forecasts for the improved rail service do not explicitly include potential diversion from scheduled intercity bus service. Intercity bus and high-speed rail service serve two different markets. The first is price sensitive and relatively time insensitive. The second is more sensitive to trip time and less sensitive to price. Therefore, it is not likely that there would be a major overlap in these two markets or*

substantial impact on intercity bus ridership or employment.

MA 4-1.10

Comment: p. 5-19 and p. 5-22, 3d line. Train noise and vibration. Refer to figure 5.1-1. This should be 5.2-1.

Response: *The figure has been removed from Chapter 5 and therefore is not included in the FEIS/R.*

MA 4-1.11

Comment: p. 5-19. Vibration. How about rubber or neoprene pads between the tie and rail?

Response: *Resilient rail fasteners, including rubber or neoprene pads between the tie and rail, are often used for vibration control of rail systems with track supported directly on heavy concrete slabs, such as rapid transit lines in subway tunnels or on aerial structures. However, this treatment would not be an effective vibration control measure for the Northeast Corridor, which has ballasted track.*

MA 4-1.12

Comment: A question not addressed. Currently many of the Inland Corridor/Springfield trains are split off or combined with Northeast Corridor trains at New Haven. How would a fleet of high speed dedicated electric trains interface with the Springfield services? How would such a service be affected?

Response: *Presently trains going to Boston via Springfield, MA split in New Haven from the trains going to Boston via Providence. In the future, passengers on trains operating via Springfield will transfer at new Haven to/from the high-speed/conventional Boston to Washington trains. This eliminates the current requirement to standby for up to twenty minutes in New Haven for an engine change, prior to continuing the trip.*

Geoffrey H. Leake

MA 4-2.1

Comment: Would it be possible to place the electric substations underground? That would eliminate humming, etc.

Response: *The substations, switching stations, and paralleling stations will incorporate modern equipment. The transformers are specified with a maximum noise level of 45 dBA at the perimeter of the substation with all cooling fans operating. Landscaping, screening will be installed as appropriate to further minimize the visual, or other intrusive features of the installations.*

The underground installation of the equipment is extremely difficult due to the proximity to flood plains; and the general technical requirements including fire suppression, cooling, pressure relief, etc. associated with fully enclosed substation installations.

Paula Cole

MA 4-3.1

Comment: [This writer opposes the project because it poses a danger to children.]

Response: *Comment noted.*

Ruby N. Harris

MA 4-4.1

Comment: I am concerned about my health, safety, noise, the way of life at Dale Village as well as the decrease in the value of my property.

Response: *Potential impacts of the proposed project on health are discussed in Volume I, Section 4.5 of the FEIS/R. Potential impacts on public safety and appropriate mitigation are discussed in Volume I, Sections 4.8 and 5.1. The issue of the proposed project's impact on real estate values is discussed in Volume I, Section 4.2 of the FEIS/R. Impacts on noise are addressed in section 4.4. Also see Response 3.5 and 3.7 in this volume.*

Nancibeth Avery-Shammas

MA 4-5.1

Comment: I submit that a close as possible to exact measure of vibration be provided on the new trains to see if there is any reduction in vibration.

Response: *Vibration measurements of the Swedish X2000 tilt train and the German InterCity Express (ICE) trainset, operating on the*

Northeast Corridor in New Jersey, were made during 1993. The results of these tests indicated that ground-borne vibration from the ICE trainset was about 30 percent lower than for the current Amtrak AEM7 locomotive-powered electric trains, and that vibration from the X2000 trainset was about 60 percent lower than for the AEM7-powered trains. The data for these trains have been used to estimate the minimum-expected project vibration impact, as described in Volume II, Section 4.4 of the FEIS/R. The mitigation provisions for this project contained in Volume I, Section 5.1.1(d) require that Amtrak use projected levels of noise and vibration emissions in evaluating competing designs for its high-speed equipment acquisition.

MA 4-5.2

Comment: Regarding electromagnetic fields: In light of recent studies and [the input of] professionals trained in the fields of electrical engineering and related fields, I believe it is impossible to state that there is no credible evidence that EMFs are dangerous. I believe that a causal relationship must be disproved absolutely before the project can go any further.

Response: *See response to Comment CT 4-97.7 and Response 3.5 in this volume.*

MA 4-5.3

Comment: We pay for the repair of the fence and the cycle continues. The mystery remains to me as to why a stronger barrier was not constructed by Amtrak and the MBTA (the Fence at Dale Village should have been a supplement to the tracks' barrier).

Response: *The Northeast Corridor rail line in Massachusetts is owned by the MBTA, which is responsible for funding the maintenance and repair of the rail line, including security fences. Amtrak, the MBTA and other Massachusetts agencies plan a number of meetings to identify specific steps to address complaints along the right-of-way in the Southwest Corridor.*

MA 4-5.4

Comment: When a resident of Dale Village sees

someone on the tracks, he/she calls the MBTA police or Amtrak police. I have never seen them respond to a call, and often we take it upon ourselves to go out and confront the individual. I believe the level and frequency of maintenance on the track area has to be brought up to standard before any changes can be made.

Response: *The statement regarding the need for the MBTA or Amtrak police to respond to handle trespassers has been forwarded to the Amtrak police for follow up.*

Amtrak currently inspects the Northeast Corridor monthly using a state of the art Geometry Car that checks and records the quality of each foot of track on the corridor. The results of these trips are recorded and given to the local maintenance divisions for correcting any defects.

*The Northeast Corridor has the highest maintenance standards in order to support high speed service. In addition to special maintenance, a program of routine maintenance is conducted along the entire Northeast Corridor. Permissible track conditions are regulated by FRA at 49 CFR 201 *et seq.* FRA's Office of Safety periodically inspects this track to ensure compliance with the regulations by Amtrak.*

Barbara Lattero

MA 4-6.1

Comment: The lack of community involvement by Amtrak officials is outrageous.

Response: *Comment noted. Amtrak reports that it intends to take a far more proactive role in addressing the concerns of property owners abutting railroad property and communities through which Amtrak operates.*

However, the primary responsibility for railroad issues on the Northeast corridor in Massachusetts remains with the MBTA, a state agency, which owns the rail line and pays Amtrak to maintain it. Amtrak has stated that it plans to work more closely with the MBTA to focus better on local concerns and identify the funding

necessary to address local issues.

MA 4-6.2

Comment: Multiple health issues are involved not least of which are noise levels (hearing problems), sleep deprivation, stress, etc. What does Amtrak intent to do to decrease these factors? How can we be assured Amtrak will come through on promises?

Response: *A discussion of noise mitigation is discussed in Volume I, Section 5.1.1(d) of the FEIS/R. See responses to comments MA 2-11.15 and MA 2-16.2.*

Helen Mandosa

MA 4-7.1

Comment: We are concerned about the possible pollution for the children especially.

Response: *Comment noted.*

Sherry Golden

MA 4-8.1

Comment: I am extremely concerned about the noise as well as the dangers of the electromagnetic fields.

Response: *Comment noted.*

Deborah Mull McDonald

MA 4-9.1

Comment: What will the effect be in the vibration level?

Response: *Volume I, Section 4.4 of the FEIS/R discusses vibration impacts and appropriate mitigation. Also see Response 3.6 in this volume.*

MA 4-9.2

Comment: What will the effect be on the noise level?

Response: *A discussion of potential noise impacts is found in Volume I, Section 4.4 of the FEIS/R. Also see Response 3.6 in this volume.*

MA 4-9.3

Comment: What danger will we experience from the electromagnetic fields?

Response: *Volume I, Section 4.5 of the FEIS/R presents an updated discussion of the*

EMF issue. Also see Response 3.5 in this volume.

MA 4-9.4

Comment: What will this look like aesthetically? No one has shown us a drawing of the towers and wires.

Response: Volume I, Figure 2.4.1 and various figures in Section 4.11 of the FEIS/R present photographs or drawings of the proposed overhead catenary system.

MA 4-9.5

Comment: Will it affect radio reception?

Response: No effects on radio transmission or reception are anticipated.

MA 4-9.6

Comment: What recourse will we have if there is structural damage to our homes?

Response: No structural damage is expected to result from this project. However, Amtrak is a private corporation and may be liable for impacts to property that can be proven in court.

MA 4-9.7

Comment: What will this do to our property values?

Response: The general finding of this study is that the proposed action will not significantly impact property values. This issue is discussed in Volume I, Section 4.2.

Anne Ladd

MA 4-10.1

Comment: I would like verification of the following: No fencing installed in the Fowl Meadow area.

Response: No fencing is proposed for this area.

MA 4-10.2

Comment: I would like verification of the following: No parking garage in the vicinity of the Route 128 railroad station.

Response: See response to Comment MA 1-4.1.

MA 4-10.3

Comment: I would like verification of the following: No change to the elevation of the University Avenue bridge in the

Canton/Westwood area, or the elevation of the tracks under it.

Response: The location in question is not clear. However, the only work planned for the proposed action in Massachusetts regarding bridge raising is Maskwonicut Street.

MA 4-10.4

Comment: Page 4-52 says that, for endangered species in the Fowl Meadow area, consultation will be initiated to identify mitigation measures, should they be required. How will you determine whether such measures will be required?

Response: Further consultation was initiated with the Massachusetts Natural Heritage and Endangered Species program in an effort to determine if they felt the project would adversely affect the rare species previously identified in the Fowl Meadow and Ponkapoag Bog area. They did not feel that work within the railroad right-of-way would create an adverse impact to these species. This correspondence completed the consultation.

MA 4-10.5

Comment: At the hearing on November 16, it was suggested that crews will work at night in Fowl Meadow. Will there be an environmental monitor present when they work to assure wetlands are not affected?

Response: See response to Comment MA 3-3.3.

Deborah McDonald

MA 4-11.1

Comment: This writer objects to the comment process.

Response: Comment noted.

Anthony Petrillo

MA 4-12.1

Comment: This writer opposes the project.

Response: Comment noted.

Charles Torchette

MA 4-13.1

Comment: Another hazard that comes to mind is that if there is an accident at these speeds

nobody will survive and the damage it will create.

Response: *FRA's highest priority is safety. The first element in ensuring the safety of this system is to design out the potential for accidents wherever possible through such items as the new signal system which includes automatic train stop and improved track. The second element is to minimize the impact of an accident. In that regard, FRA has conducted a comprehensive analysis of the performance of trains in accident conditions and identified measures that would maintain the safety of passengers. These will be incorporated into the specifications used in Amtrak's high-speed trainset procurement.*

Darlene Webb

MA 4-14.1

Comment: We have learned to live with the present noise level but certainly trains running at 150 mph would make it uninhabitable.

Response: *Potential noise impacts involving increases to existing levels are discussed in Volume I, Section 4.4 of the FEIS/R. Also see Response 3.6 in this volume.*

MA 4-14.2

Comment: Risk from the high voltage wires emitting electro-magnetic fields.

Response: *Volume I, Section 4.5 of the FEIS/R presents an updated discussion of the EMF issue. Also see Response 3.5 in this volume.*

MA 4-14.3

Comment: The effects will render my house virtually unsalable! All the equity that we have built into our house over the past years will be down the toilet.

Response: *The issue of the proposed project's impact on real estate values is discussed in Volume I, Section 4.2 of the FEIS/R.*

Mike & Mary Rolfes

MA 4-15.1

Comment: I am doubtful that an enhanced track and vehicle maintenance program will minimize noise and vibration of the

trains. I would expect this is being done now and does not appear to make a significant difference.

Response: *The enhanced program envisioned is a significant improvement over Amtrak's current practice and would result in meaningful improvements.*

MA 4-15.2

Comment: We are in favor of building a sound barrier to protect ourselves from the disruption of our everyday home life.

Response: *Comment noted.*

MA 4-15.3

Comment: We are very concerned in regards to electro-magnetic fields for our child as well as ourselves.

Response: *Volume I, Section 4.5 of the FEIS/R presents an updated discussion of the EMF issue. Also see Response 3.5 in this volume.*

MA 4-15.4

Comment: We feel we should be compensated in damages for the loss of property value to our home.

Response: *The issue of the proposed project's impact on real estate values is discussed in Volume I, Section 4.2 of the FEIS/R.*

Collen Little

MA 4-16.1

Comment: I object to the project because of the possibility of increased noise.

Response: *Comment noted.*

MA 4-16.2

Comment: We are very concerned about electromagnetic fields.

Response: *See response to Comment MA 4-15.3.*

Kevin W. Spolsino

MA 4-17.1

Comment: I shall be subjected to noise and pollution from "fugitive dust" out of the construction process.

Response: *It is true that there will be "fugitive dust"*

created during the construction phase of the project. As stated in Volume III, Technical Study 10 of the DEIS/R, "good 'housekeeping' practices, such as wetting or chemically treating exposed earth areas, covering dust-producing materials during transport, and limiting construction activities during high wind conditions, should minimize the dust impacts."

MA 4-17.2

Comment: I am opposed to the sight blight of high tension poles and lines in proximity to my back yard.

Response: Comment noted.

MA 4-17.3

Comment: I am wary of the possible health hazard posed by living close to the EMF emitted by high tension lines.

Response: See response to Comment MA 4-15.3.

MA 4-17.4

Comment: I am also opposed to being subjected to the constant buzzing noise from the transformers.

Response: The mitigation incorporated in the project in Volume I, Section 5.1.1(d) provides that the fixed electrical facilities will not emit noise above impact threshold levels.

MA 4-17.5

Comment: I am appalled at the lack of information disseminated to the public with regard to this project.

Response: Opportunities for public involvement in the environmental process for this project are described in Volume I, Appendix C of the DEIS/R. FRA has made every effort to provide interested members of the public with information on this proposed project. However, due to the geographic scope of the project, many people may not have had as convenient access to information as would be provided on a project with a smaller geographic scope.

Rita Sabina Mandosa

MA 4-18.1

Comment: So much damage has been done to our home and way of life that the homes should be taken by eminent domain, on an individual choice basis.

Response: Because the Northeast Corridor rail line has been one of the nation's most active railroads for over a century, Amtrak does not believe that today's railroad activities differ in any significant way from the activities of Amtrak's predecessors dating back to 1850. It should be noted, however, the MBTA owns the Northeast Corridor trackage within Massachusetts and operates the vast majority of trains on the rail line. Amtrak has stated it is willing to try to address individual or community concerns and would meet with any individual or official to identify whether concerns can be alleviated. The appropriate person at Amtrak to contact regarding resolution of local concerns is:

David J. Carol
Amtrak
Saybrook Junction Marketplace
455 Boston Post Road
Old Saybrook, CT 06475
(203) 395-3004.

MA 4-18.2

Comment: (Appropriate form of relief would be) payment of damages for lost value of property due to this situation which makes our home greatly devalued for purpose of sale.

Response: See responses to comments MA 4-9.6 and MA 4-9.7.

MA 4-18.3

Comment: (Request) Congressional-level hearings on the impact upon abutters of both the existing situation and the introduction of high voltage electrical cables.

Response: This request is beyond the scope of the study.

MA 4-18.4

Comment: Too many recent studies link high rates of cancer to such EMF produced by this.

Response: See response to Comment MA 4-15.3.

MA 4-18.5

Comment: More analysis of the benefit versus the risk must be done.

Response: *The FEIS/R, Volume I identifies the impacts, both beneficial and adverse, that would result from the Proposed Action.*

Martha Meaney

MA 4-19.1

Comment: There is no overall financial analysis or cost/benefit analysis presented. That is, there is no overall conclusion as to the net costs which would be incurred by society due to the proposed electrification.

Response: *See response to Comment MA 4-18.5.*

MA 4-19.2

Comment: Two underlying assumptions to the analysis - that the trip from Boston to NYC will be reduced by one hour and the projected increase in ridership will reach 94% by 2010 - are not explained nor are they questioned.

Response: *Section 4.9 of Volume I of the DEIS/R explains the reasons for the anticipated reduction in travel time as a result of electrification, including, higher locomotive operating speeds, improved acceleration and deceleration capabilities and elimination of the current locomotive switch at New Haven. Train Performance Calculator (TPC) runs have been performed on the proposed route and the results indicate a three hour trip time can be achieved. As Amtrak speed and frequency improves and as other travel modes become more congested, passenger rail is expected to capture a greater percentage of the air shuttle market between Boston and NYC. Volume I, Section 4.9 of the FEIS/R discusses the issue of modal choice in general and the predicted shift of travellers from automobiles and airplanes to rail. Also see Response 3.9 at the beginning of this volume.*

MA 4-19.3

Comment: A glaring omission is the impact of the project on marine and river industries.

Response: *Potential impacts to marine traffic and*

associated mitigation are discussed in Volume I, Sections 4.2 and 4.9 of the FEIS/R. A summary of this information is included at the beginning of Volume III.

MA 4-19.4

Comment: If P&W does close down, there is no consideration of what other forms of transportation would move the freight.

Response: *The issue of the proposed project's impact on freight rail service and the appropriate mitigation of this impact is discussed in Volume I, Sections 4.9 and 5.1 of the FEIS/R. Also see Response 3.3 in this volume.*

MA 4-19.5

Comment: On the issue of EMFs, we just don't know, do we?

Response: *The comment does not state specifically what it is that is not known. Given the large number of published studies that describe the scientific research, a good deal of information is known about how cells, tissues, animals, and humans respond, or fail to respond, to exposures to EMF. Collectively, these studies have been evaluated and summarized in the DEIS/R and in the additional studies Documentation of Occupational Studies of EMF, Analysis of EMF Impacts on Children, and Analysis of EMF Impacts on Fish Migration prepared for the FEIS/R. Information contained in these additional studies is presented in Volume I, Section 4.5 of the FEIS/R. Also see Response 3.5 at the beginning of this volume.*

William J. and Catherine Glynn

MA 4-20.1

Comment: I object to the increased rail noise.

Response: *Comment noted. Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential noise impacts and mitigation. A summary of this information is included at the beginning of Volume III. Also see response 3.5 at the beginning of this volume.*

MA 4-20.2

Comment: Increased vibrations resulting from an

increase in the number of trains and an increase in speed.

Response: *Comment noted. Volume I, Sections 4.4 and 5.1 discuss vibration impacts and appropriate mitigation. Also see response 3.6.*

MA 4-20.3

Comment: Safety problems resulting from unrestricted access to the rail line by children and animals.

Response: *Potential impacts on public safety and appropriate mitigation are discussed in Volume I, Sections 4.8 and 5.1 of the FEIS/R.*

MA 4-20.4

Comment: Potential health risks posed by electromagnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

Response: *Volume I, Section 4.5 of the FEIS/R presents an updated discussion of the EMF issue. Also see Response 3.5 in this volume.*

MA 4-20.5

Comment: Danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.

Response: *FRA establishes minimum standards for the condition of track at specific speeds and Amtrak is under an obligation to maintain its track in at least this condition. FRA safety inspectors periodically inspect the track to ensure Amtrak's compliance. Amtrak, for its part, has shown on its existing high-speed track in the Washington to New York City segment of the NEC, that reliable maintenance of track to higher standards is achievable.*

MA 4-20.6

Comment: Decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *The issue of the proposed project's impact on real estate values is discussed in*

Volume I, Section 4.2 of the FEIS/R.

MA 4-20.7

Comment: We oppose the Northeast Corridor Electrification Project unless: Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.

Response: *Comment noted.*

MA 4-20.8

Comment: We oppose the Northeast Corridor Electrification Project unless: Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes.

Response: *It is important to note that all of the project vibration impacts identified represent annoyance effects and not building damage effects. Volume I, Section 5.1.1(d) of the FEIS/R addresses vibration mitigation.*

MA 4-20.9

Comment: We oppose the Northeast Corridor Electrification Project unless: Access to the corridor is secured and policed to eliminate possible injury to children and animals.

Response: *For safety reasons, Amtrak prohibits unauthorized access to the railroad right-of-way. As the right-of-way is private property, unauthorized access constitutes trespassing, and it is Amtrak's stated policy to aggressively enforce the trespassing statutes. Due to the safety concerns of pedestrians crossing the tracks, the FRA plans to require certain areas of the right-of-way to be fenced. Also see response to comment MA 2-11.16.*

MA 4-20.10

Comment: We oppose the Northeast Corridor Electrification Project unless: A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.

Response: *Volume III of the DEIS/R (Section 5)*

provides a detailed assessment of anticipated magnetic field intensities from the electrification project, conclusions of the most recent and comprehensive studies on the impacts of EMF on human health, and summaries of current regulatory and industry standards for EMF exposures levels. In response to comments on the DEIS/R, additional studies have been performed in the areas of occupational exposures, exposures to children, and exposures to fish. These modifications, presented in Volume II, Sections 5.3 and 5.4 of the FEIS/R, also include the results of international studies complete since the submission of the DEIS/R.

MA 4-20.11

Comment: We oppose the Northeast Corridor Electrification Project unless: New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.

Response: *FRA is responsible for the regulation of all aspects of rail safety and the enforcement of these regulations. These regulations are updated when required to address the changing needs of the rail environment. They can be found in the Code of Federal Regulations, Chapter 49 beginning with section 209.*

MA 4-20.12

Comment: We oppose the Northeast Corridor Electrification Project unless: Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *Comment noted.*

Scott Allen

MA 4-21.1

Comment: I object to the significant increase in noise. An increase in noise which is already beyond allowable levels.

Response: *See response to comment MA 4-20.1.*

MA 4-21.2

Comment: I object to the significant vibrations

resulting from the increase in the number of trains and the increase in speed.

Response: *See response to comment MA 4-20.2.*

MA 4-21.3

Comment: I object to the safety problems resulting from unrestricted access to the rail lines by children and animals.

Response: *See response to comment MA 4-20.3.*

MA 4-21.4

Comment: I object to the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

Response: *See response to comment CT 4-97.7.*

MA 4-21.5

Comment: I object to the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.

Response: *See response to comment MA 4-20.5.*

MA 4-21.6

Comment: I object to the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See response to comment MA 4-20.6.*

Maria Dounelis

MA 4-22.1

Comment: We request you include the vibration transfer of the Southwest Corridor tunnel and its exhaust tower, from both existing conditions and potential future changes, originating from the running stock and the speed of that stock.

Response: *This comment relating to the existing Southwest Corridor tunnel exhaust shaft is outside the scope of this environmental study. The incremental noise, vibration and air quality impacts of the proposed electrification are described in Chapter 4, Volume I of the DEIS/R.*

MA 4-22.2

Comment: We request you include the noise transfer

of the Southwest Corridor tunnel and its exhaust tower, from both existing conditions and potential future changes, caused by the running stock and the speed of that stock.

Response: See response to comment MA 4-22.1.

MA 4-22.3

Comment: We request you include the ability of the fan exhaust system to keep air quality within accepted pollution limits in the immediate surrounding exhaust area during use.

Response: See response to comment MA 4-22.1.

MA 4-22.4

Comment: We request you include the silencing of the noise transfer caused by the fans themselves to the abutting properties. The situation is currently intolerable.

Response: See response to comment MA 4-22.1.

MA 4-22.5

Comment: We request you include an explanation of placement and resulting electromagnetic effects of any new power lines within the tunnel.

Response: *Magnetic fields are capable of penetrating most materials and structures (DEIS Volume III, Section 5.6), this would include materials associated with a tunnel. Exposures to EMF in tunnels will not differ significantly with other field estimates along the corridor (See DEIS Volume III, Section 5.5.7), because EMFs would not be "trapped" by the tunnel thereby increasing exposure.*

Thomas Donahue

MA 4-23.1

Comment: I feel the following is critical:

- Noise barriers along the full length of the Cliffmont Condominium.
- Stabilizers or similar devices to reduce vibration and cracking of the foundations of our property.
- Secure access and police presence along the line to prevent accidental

injuries to children and animals.

- Compensation to owners abutting the tracks for any loss in the value of their property due to the electrification project.
- A national study on the effects of EMFs on long-term health, with the electrification project put on hold unless the study proves conclusively that they do not pose a risk.
- Tighter regulations for rail operators, with strong enforcement and stiff penalties for violators.

Response: See response to Comments MA 4-20.1 through MA 4-20.6, and MA 4-20.10.

Theresa C. O'Connor-Heisler

MA 4-24.1

- Comment:
- The noise levels have been found to be "far above" the acceptable noise levels for a residential neighborhood.
 - The vibrations created from the trains cause our home to shake.
 - We cannot have our windows open in the summer.

Response: *Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential noise and vibration impacts and appropriate mitigation. A summary of these issues is included at the beginning of Volume III.*

MA 4-24.2

Comment: We had to pry the information that the work was "prep" work for the electrification project from employees of Amtrak.

Response: *No work is underway as part of the electrification project, although other NECIP work has been underway in the study area since 1978.*

MA 4-24.3

Comment: The present conditions have been known to be unacceptable for a long time and Amtrak and the MBTA have taken no action to improve their relations with

neighbors by addressing the problems they have created.

Response: See response to Comment MA 4-24.1

Kenneth Chauson

MA 4-25.1

Comment: I am unsure of the effects of power lines.

Response: Volume I, Sections 3.5 and 4.5 of the FEIS/R present an updated discussion of the EMF issue. This information is also summarized at the beginning of Volume III.

Leonard M. Singer

MA 4-26.1

Comment: This writer supports the project due to its environmental and economic benefits.

Response: Comment noted.

Patricia La Colla

MA 4-27.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-27.2

Comment: We oppose the Northeast Corridor

Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Barbara Sullivan

MA 4-28.1

Comment: I totally disagree with the proposal to build an overhead electrical system.

Response: Comment noted.

Kathleen Scheidesha

MA 4-29.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by

high-voltage power lines running adjacent to our property (30 feet).

- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6, and MA 4-20.10.

MA 4-29.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Jack Darling

MA 4-30.1

Comment: I object to:

- the increased rail noise

- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-30.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in

property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Shelly Carvevale

MA 4-31.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-31.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and

proves conclusively that they are not a danger to people, especially children.

- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Arthur Ellis

MA 4-32.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-32.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.

- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Danny J. Ferzoc

MA 4-33.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-33.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Michael M. Shamas

MA 4-34.1

Comment: Electro magnetic fields have not been sufficiently studied to determine the long term effects.

Response: See response 3.5 in this volume.

MA 4-34.2

Comment: These trains have no business travelling 150 mph within the city limits [Roslindale].

Response: See response to MA 2-5.9.

Mr. Vernon Freitas

MA 4-35.1

Comment: This writer opposes the project because of its negative impact on property values, view, noise, safety and health.

Response: *Comment noted.*

Mary Snyder

MA 4-36.1

Comment: I would hope that [existing MBTA observation] wells could provide you with some information on the water table in the area and you could let us know how you intend to deal with this problem.

Response: *As noted in the FEIS/R, Volume I, Section 4.12, the installation of catenary structures should not have any impact on groundwater levels, since no poles will be utilized in the Project MUD area. By eliminating the catenary poles, the existing membrane will not be disturbed and the Proposed Action would not be expected to have any impact on groundwater levels.*

Christine Quigley

MA 4-37.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-37.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Jeff Scoville

MA 4-38.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-38.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Mr. & Mrs. Richard Sayers

MA 4-39.1

Comment: My husband and I are completely against these high power lines.

Response: See response 3.5 of this volume.

MA 4-39.2

Comment: Nobody needs an increase in noise.

Response: Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential noise impacts and appropriate mitigation. A summary of this information is included at the beginning of Volume III.

Gwendolen G. Noyes

MA 4-40.1

Comment: This writer supports the project because of its positive impact on air quality.

Response: Comment noted.

Catherine and Robert Slade

MA 4-41.1

Comment: The U.S. government should spend some money to help alleviate the negative impact such high speed service will have on its abutters and neighbors.

Response: Comment noted. The FRA will fund measures as part of this project that are necessary to ensure that significant impacts of electrification are mitigated to the extent practical. The formal Record of Decision (ROD) will document these measures.

MA 4-41.2

Comment: It appears there is no regard for abating noise.

Response: See response to Comment MA 4-39.2.

MA 4-41.3

Comment: Are there any precautions to be taken for the electromagnetic fields?

Response: Due to low intensities of EMF that people would be exposed to as a result of the proposed electrification and the fact that there are no studies that have found sufficient evidence to conclude that ELF EMF poses health risk, it is not clear that any mitigation measures are necessary. Nonetheless, Volume III of the DEIS/R (Section 5.6) discusses the hypothetical options available for mitigation of magnetic fields. The two general approaches that can be employed for mitigating alternating current magnetic fields in the power frequencies

(60 Hz) associated with this project are phase cancellation and shielding. These two approaches are discussed in detail in the DEIS/R. It should be noted that the design of the proposed electrification incorporates mitigation measures, particularly the configuration of the catenary system. Beyond these design considerations, rapidly decreasing field strength, with distance from a source (DEIS/R, Volume III, Section 5.5), makes physical separation from the source a major factor in establishing the magnetic field intensity to which a person is exposed (DEIS/R, Volume III, Figure 5-7).

Bernie & Pamela McElhenny

MA 4-42.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-42.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.

- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Jimin Zhang

MA 4-43.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-43.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Thomas D. Scully

MA 4-44.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.

- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-44.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Kathleen Rowlings

MA 4-45.1

Comment: Please note that I have enclosed a copy of the MAP Sheet 28 which has errors. I have indicated errors.

Response: Although Volume II of the DEIS/R is not

being reissued, these comments have been incorporated into an amended copy on record at the Volpe Center in Boston and at the FRA in Washington, DC.

MA 4-45.2

Comment: Stronger fencing and/or other suitable barriers should be constructed before any upgrade is considered

Response: *Proposed fencing locations are shown in Chapter 5, Table 5.1-1 of Volume I. As discussed in this chapter, Amtrak will cooperate with the MBTA on the evaluation of the need for additional fencing along the Massachusetts portion of the NEC mainline.*

MA 4-45.3

Comment: Noise abatement measures should be taken including:

- examining current noise in relation to current noise pollution standards
- engineering measures be taken to provide trains that do not make as much noise
- that adequate noise barriers be in place before any upgrade takes place
- that a study of the impact on the abutting conservation land be conducted in regard to the effect of noise and vibrations on tree root systems, aquifers, ground water and specifically Mother Brook before any upgrade takes place.

Response: *The analysis in the FEIS/R indicates the incremental increases in noise levels which could be attributed to electrification and applies appropriate standards to determine the anticipated impact (see Volume I, Sections 3.4 and 4.4). Noise levels that exceed the impact thresholds would be mitigated as discussed in section 5.1 of the FEIS/R.*

Train noise from the proposed project would generally be reduced due to the switch from diesel to electric locomotives. Amtrak has also agreed to implementing a comprehensive

maintenance program to include elements such as installing equipment to detect wheel flats, as well as wheel truing and rail grinding in order to reduce the level of noise produced by trains.

No impacts are anticipated to root systems, aquifers, ground water, or surface waters due to noise produced by the proposed project.

MA 4-45.4

Comment: Proper maintenance of footbridges including adequate lighting, policing, and snow and ice removal should be provided so that access is safe.

Response: *The Northeast Corridor rail line in Massachusetts is owned by the MBTA, which is responsible for funding the maintenance and repair of the rail line, including pedestrian overpasses, and policing the Southwest Corridor. Amtrak, the MBTA and other Massachusetts agencies plan a number of meetings to identify specific steps to address complaints along the right-of-way in this area.*

MA 4-45.5

Comment: Upgrading should not take place until adequate studies of the health effects of EMF have been conducted.

Response: *See Response 3.5 in the beginning of this Volume.*

MA 4-45.6

Comment: Upgrading should not take place until people are advised of what chemicals are being used to defoliate the track area and what is the potential harm to humans.

Response: *Amtrak presently has a maintenance program for controlling vegetation that is approved yearly by the State of Massachusetts called the Yearly Operating Plan. This plan, which is required under 333 CMR 11.00 *et seq.* and submitted to the MA Department of Food and Agriculture, outlines all chemicals and methods used to control vegetation within the ROW as well as sensitive areas and restricted application procedures utilized in these areas. The proposed project would not*

alter the methods or chemicals used in this plan.

MA 4-45.7

Comment: Adequate rodent control should be initiated so that rats are not a problem for the neighborhoods during construction.

Response: *Rodent control measures would be implemented during construction as appropriate.*

MA 4-45.8

Comment: Residents should be advised as to who the accountable parties are with respect to problems, maintenance, and policing.

Response: *In Massachusetts, the MBTA owns the ROW and is the party responsible for these functions.*

MA 4-45.9

Comment: How will drainage impact the pools of water that are adjacent to the Metropolitan Avenue Footbridge?

Response: *No impacts to drainage are anticipated at this location. The project would not alter existing drainage flows or systems.*

MA 4-45.10

Comment: Proposed fencing and noise barrier construction - is this being considered for the Metropolitan Avenue/Dale Street/Sherrin Street area?

Response: *Since most of the ROW in this area is already fenced, no new fencing has been recommended. However, as indicated in Volume I, Table 5.1-1, two breaks in the existing fencing in this area would be repaired.*

As indicated in Volume I, Section 4.4 between 21 and 229 residences in the Boston area could be impacted by the proposed project. Section 5.1 outlines the proposed plan to monitor and mitigate noise impacts along the corridor.

MA 4-45.11

Comment: There is an adverse noise impact with the build option. How is that going to be remedied in this area of Hyde Park?

Response: *See response to Comment MA 4-45.10*

Stephen H. Kaiser

MA 4-46.1

Comment: My primary concern for the adequacy of the Rail Electrification EIR is the matter of energy efficiency and accountability.

Response: *The energy efficiency analysis has been revised in the FEIS/R.*

MA 4-46.2

Comment: My second concern is visual. (Detrimental visual effects include) overhead wires and poles, loss of vegetation, etc.

Response: *Volume I, Sections 4.11 and 5.1 discuss potential visual impacts resulting from the project and appropriate mitigation. A summary of this information is included at the beginning of Volume III.*

MA 4-46.3

Comment: Therefore, I am attaching this 1978 EOE Statement and incorporating it explicitly with my comments on the 1993 DEIS/R. I specifically request that all tables be updated in a complete and similar format.

Response: *The relevant information requested, as it relates to the proposed action, is contained in Volume I, Section 4.6.*

MA 4-46.4

Comment: The resulting multiplier of 1.57 implies that up to 36% of the system power could be lost to theft.

Response: *No "theft" of energy is accounted for in the energy consumption calculations. The commenter points out all of the areas in which energy inefficiencies occur (e.g., generation, transmission, locomotion) and these are the only areas in which energy loss is included in the calculations. The difference in train speeds between the current diesel operation and the proposed electric operation is one reason for increased energy consumption of the electrified alternative. In addition, there are significant differences in train sizes and passenger loadings. The conservative*

nature of the train size and passenger loading assumptions for the proposed electrification alternative result in the artificially high results for energy consumption on a passenger-mile basis, which is a "fairer" basis for comparison between the current, no-build and electrification alternatives, since it eliminates discrepancies caused assumptions regarding passenger loading and train sizes. Table 4.6-7 in Volume I, Section 4 of the FEIS/R shows the comparison between alternatives, and it can be seen that the electrification alternative is more efficient, on a per seat-mile basis, than either the current schedule or the no-build alternative. The smaller train sets suggested as more realistic by Amtrak and described in Volume I, Section 4.6 of the FEIS/R, have slightly higher energy consumption on a per seat-mile basis, leading to the conclusion that significant increases, in speed and ridership can be achieved with a slight reduction in energy efficiency (when compared with the no-build alternative).

MA 4-46.5

Comment: The Final EIR should show a plan, analysis and commitment to mitigation management which would work at all levels to reduce energy consumption and produce an electric power system which is proudly close to the theoretical energy efficiency potential promised by electric power.

Response: *The response to comment MA 4-46.4 points out that on a seat-mile basis the proposed electrification alternative is more efficient than the current operations or the no-build alternative, and the smaller train set variation on the proposed electrification alternative is only slightly less efficient than the current or no-build options. In addition, it should be noted that the efficiency of electricity generation and transmission (at least up to the point of the substations) is out of the control of Amtrak. Section 4.6 also notes that Amtrak's design is incorporating such innovation as regenerative braking which alters the potential for significant energy savings.*

MA 4-46.6

Comment: In working through these energy calculations, I note that the EIR lacks a definitive chapter on ridership and travel times/speeds. We should request this information in the Final EIR, including the assumptions for train frequency, seats per train and passengers per train.

Response: *Train frequencies are assumed to be 16 daily departures for high-speed services and 10 daily departures for conventional service. The number of cars and seats per train is assumed to be varied to accommodate hourly differences in total demand and its geographic distribution within the corridor. The number of passengers per train results from the interaction of train frequency, seats per train, and passenger demand, rather than being determined arbitrarily in advance.*

MA 4-46.7

Comment: I request that an explicit tabulation be made of empirical data and theoretical calculations [regarding the energy efficiency of electrical trains], both for existing conditions and for year 2010 conditions.

Response: *Volume I, Section 4.6 of the FEIS/R presents a revised discussion of the energy efficiency of electric trains. This Section tabulates the key data and summarizes the calculations used to calculate the energy consumption for current and 2010 conditions. The only theoretical calculations used in the energy consumption analysis are those used to calculate electricity consumption for the proposed electrification alternative. These calculations are done by a computerized model (the Train Performance Characteristic model) that utilizes data from actual operations in the train being analyzed to simulate energy consumption for the route being studied. The model accounts for number and length of stops, acceleration rates, velocity, and track grade in its calculations. Other data used in the energy analysis are directly from actual operations. For instance, the generating efficiency of fossil-fired power plants was based on data reported nationally by*

utilities operating those facilities.

MA 4-46.8

Comment: The Route 128 station is located in the Fowl Meadow area in Canton and Dedham. The report should identify the significant existing and potential water supply sources in the marsh and Neponset River area.

Response: *This information is included in Volume I, Sections 3.12.2(a) and 4.12.2(a) of the FEIS/R.*

Eva Zazami

MA 4-47.1

Comment: We would like you not to approve an overhead electrical system along the tracks.

Response: *Comment noted.*

Donna E. Melanson

MA 4-48.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-48.2

Comment: We oppose the Northeast Corridor

Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Anthony Milano

MA 4-49.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.

- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-49.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
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- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Deborah Creech

MA 4-50.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.

- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.

- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-50.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Thomas Maciejko

MA 4-51.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-51.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in

property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Jennifer Wong

MA 4-52.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-52.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and

proves conclusively that they are not a danger to people, especially children.

- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Ira Nily
MA 4-53.1

- Comment: I object to:
- the increased rail noise
 - the increased vibrations resulting from an increase in the number of trains and an increase in speed.
 - the safety problems resulting from unrestricted access to the rail line by children and animals.
 - the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
 - the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
 - the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-53.2

- Comment: We oppose the Northeast Corridor Electrification Project unless:
- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.

- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Margaret O'Martin
MA 4-54.1

- Comment: I object to:
- the increased rail noise
 - the increased vibrations resulting from an increase in the number of trains and an increase in speed.
 - the safety problems resulting from unrestricted access to the rail line by children and animals.
 - the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
 - the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
 - the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-54.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Samuel Conti

MA 4-55.1

Comment: I am concerned about the impacts of the noise on my health, well-being, and quality of life.

Response: Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential noise impacts and appropriate mitigation.

MA 4-55.2

Comment: The vibrations from the trains over the years has caused substantial damage to my home.

Response: Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential vibration impacts and appropriate mitigation. A

summary of this issue is also included at the beginning of Volume III.

MA 4-55.3

Comment: Nothing concrete has been done to mitigate these impacts [noise and vibrations].

Response: Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential noise and vibration impacts and appropriate mitigation. A summary of these issues are included at the beginning of Volume III.

Helen Frank

MA 4-56.1

Comment: If a parking garage was incorporated with this building [Roxbury substation] I would find it acceptable from an architectural point of view, since an electrical station cannot be other than ugly.

Response: Comment noted.

Wan Chi Lau

MA 4-57.1

Comment: I'm concerned about vibrations from the proposed high speed train will have on the foundations.

Response: See response to Comment MA 4-55.2.

William S. Kuttner

MA 4-58.1

Comment: This writer supports the project because of its environmental and economic benefits.

Response: Comment noted.

Phil Toti

MA 4-59.1

Comment: This writer opposes the project due to concerns about increased noise, vibrations, and pollution.

Response: Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential noise and vibration impacts and appropriate mitigation. A summary of these issues are included at the beginning of Volume III. Air pollution is discussed in Volume I, Section 4.10.

Peter D. Stone

MA 4-60.1

Comment: This writer opposes the project due to concerns about increased noise.

Response: *Volume I, Sections 4.4 and 5.1 of the FEIS/R discuss potential noise impacts and appropriate mitigation. A summary of this issue is presented at the beginning of Volume III.*

Unknown

MA 4-61.1

Comment: Mission Hill seems to be the most inappropriate place to locate the substation Amtrak needs in Massachusetts.

Response: *See response to MA 1-9.1.*

MA 4-61.2

Comment: EMF studies are inconclusive and therefore EMF pose a potentially serious threat to some of our most vulnerable residents, particularly children.

Response: *See response to CT 4-97.7. In addition, note that an Analysis of EMF Impacts on Children has been incorporated into Volume I, Section 4.5 of the FEIS/R.*

MA 4-61.3

Comment: An unattended building in this particular area would contribute to crime in this area. [Buildings in this area were] supposed to stimulate positive economic development. The proposed substation would be detrimental to this trend.

Response: *See response to Comment MA 4-61.1.*

MA 4-61.4

Comment: Maps were inadequate and confusing.

Response: *Comment noted.*

Mary Lambert

MA 4-62.1

Comment: The electric station should not be put on Tremont St., Boston. It should only be a substation.

Response: *Comment noted.*

Elizabeth Houghton

MA 4-63.1

Comment: USGS Maps: I am requesting, again, that Dedham Westwood Water Department will be entered on all future NECIP maps and charts. Location marked by "[large star]".

Response: *In an effort to reduce the voluminous nature of this document in accordance with NEPA [40 CFR 1500.4], the maps in Volume II of the DEIS/R have not been published as part of the FEIS/R. Except for some minor errors, the maps are generally correct. Where identified and significant, those errors have been noted in the text of the FEIS/R.*

MA 4-63.2

Comment: The Dedham Section (Readville to #128) is in flood plain area, as in 1955 and 1968. See photo of tracks and floods in 1955. (Trains halted for several days.) Flood plain capacity must be maintained.

Response: *Comment noted.*

MA 4-63.3

Comment: What are track plans in this area? Can NECIP plans be fitted onto present ROW? If 3 tracks (which could be expected) are advisable, and two have to be further apart than at present, to allow for SWAY of high speed trains, can maintenance/fire protection of road, plus the catenary also be encompassed by the present ROW?

Response: *Additional passing sidings between Boston and Providence will likely be required over the next two decades to ensure that the Northeast Corridor rail line can accommodate the projected increases in commuter and intercity trains. Any track work in Massachusetts must meet strict federal and state engineering standards, as well as federal and state environmental requirements. It is unclear at this time whether the right-of-way in any given location will have to be expanded to accommodate additional trackage. However, in as much as the MBTA owns the rail line in Massachusetts, construction of additional tracks will require state transportation*

and environmental approvals on the basis of detailed engineering plans.

MA 4-63.4

Comment: Little sharing of Federal, State and Local authorities' plans is in evidence.

Response: *Coordination among Federal, State, and local agencies is discussed in Volume I, Appendix C of the FEIS/R.*

Unknown

MA 4-64.1

Comment: This writer objected to the behavior of Ira Levy and Glen Goulet at the English High School (Jamaica Plain) hearing.

Response: *Comment noted. Copies of the transcripts from the two public hearings in Jamaica Plain are included at the end of Volume IV.*

Joan M. Gun

MA 4-65.1

Comment: This writer is generally opposed to the project due to public health concerns resulting from EMF exposure.

Response: *Volume I, Sections 3.5 and 4.5 of the FEIS/R present an updated discussion of the EMF issue. This information is also summarized at the beginning of Volume III.*

Delia Reddick

MA 4-66.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax

operational standards by Amtrak.

- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

Mark Coolen

MA 4-67.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-67.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury

to children and animals.

- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Julie Satterfield

MA 4-68.1

Comment: What happens if there is enough of an increase in vibrations to damage the foundation of my house?

Response: *Volume I, Section 5.1 of the FEIS/R discusses the proposed mitigation for vibration impacts to residences abutting the railway.*

MA 4-68.2

Comment: I am also concerned what the change to running trains at 150 mph will do to the property value of my house.

Response: *The issue of the proposed project's impact on real estate values is discussed in Volume I, Section 4.2 of the FEIS/R.*

John Malony

MA 4-69.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- I object to the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by

electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-69.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

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- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Mark Devlin

MA 4-70.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-70.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
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- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.

- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Katherine Madden

MA 4-71.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-71.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.

- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

John & Marie Pizzone

MA 4-72.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: *See responses to comments MA 4-20.1 through MA 4-20.6.*

MA 4-72.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of

Cliffmont Condominiums' property.

- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Mark Madden

MA 4-73.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting

from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-73.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Roy Rivers

MA 4-74.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by

electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-74.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Ruby Harris

MA 4-75.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-75.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.

- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Catherine Davies

MA 4-76.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-76.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.

- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Jasmine Elliot
MA 4-77.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-77.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of

Cliffmont Condominiums' property.

- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Geoffrey Johnson
MA 4-78.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting

from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-78.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Paul Ouaglin

MA 4-79.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by

electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).

- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-79.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Myron Porcodin

MA 4-80.1

Comment: I object to:

- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-80.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7

through MA 4-20.12.

Barbara Carter

MA 4-81.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-81.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes.
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.

- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Julie Cordero-Avila

MA 4-82.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-82.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes

- Access to the corridor is secured and policed to eliminate possible injury to children and animals.

- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.

- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.

- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

David Martinez

MA 4-83.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-83.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Neil McLaughlin

MA 4-84.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and

poor maintenance and lax operational standards by Amtrak.

- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-84.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7 through MA 4-20.12.

Addrienne McLaughlin

MA 4-85.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.

- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-85.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.
- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: See response to comments MA 4-20.7

through MA 4-20.12.

Kathleen & Gerard O'Brien

MA 4-86.1

Comment: I object to:

- the increased rail noise
- the increased vibrations resulting from an increase in the number of trains and an increase in speed.
- the safety problems resulting from unrestricted access to the rail line by children and animals.
- the potential health risks posed by electro-magnetic fields emitted by high-voltage power lines running adjacent to our property (30 feet).
- the danger from train derailments the result of increased train speed, and poor maintenance and lax operational standards by Amtrak.
- the decreased property values and community disinvestment resulting from increased noise, vibration and health risks.

Response: See responses to comments MA 4-20.1 through MA 4-20.6.

MA 4-86.2

Comment: We oppose the Northeast Corridor Electrification Project unless:

- Aesthetically-pleasing noise barriers are installed the full length of Cliffmont Condominiums' property.
- Vibration stabilizers and other means of mitigation are installed to reduce vibration and cracking of walls and foundations in our homes
- Access to the corridor is secured and policed to eliminate possible injury to children and animals.
- A national study on the effects of exposure to EMFs is conducted and proves conclusively that they are not a danger to people, especially children.

- New regulations and standards are created to better regulate rail operations, with strong enforcement and stiff penalties for violators.
- Property owners abutting the tracks are compensated for any loss in property value as a result of the electrification project.

Response: *See response to comments MA 4-20.7 through MA 4-20.12.*

Wan Chi Lan

MA 4-87.1

Comment: I am concerned about the vibration from proposed high-speed trains and what DOT plans to do to address the damage already caused to my house [cracks in basement].

Response: *Measures to mitigate the vibration resulting from the Proposed Action are contained in Volume I, section 5.1.1(d). The NEC main line in Massachusetts is owned by the MBTA. To the extent that a person has an existing problem associated with rail operations over this line, that person should contact the MBTA.*

U.S. Environmental Protection Agency (EPA)

MC 2-1.1

Comment: The DEIS (Volume III: Technical Studies), does not include the necessary technical support documentation for an independent evaluation of the air quality modeling. EPA recommends a Technical Support Appendix be prepared that, at a minimum, includes the assumptions and parameters contained in each of the three state coordinated MOBILE 5a input files (EPA's current emission factor model) and a discussion of the methodology used to adjust the eight-hour and one-hour carbon monoxide background concentrations for the 2010 design year,

Response: *In January of 1994, an air quality technical appendix was sent to the project review coordinator at the U.S. Environmental Protection Agency (EPA) and Connecticut Department of Environmental Protection. This appendix contained information requested by EPA in addition to other specific modeling data not included in the DEIS/R. This appendix is available for review at the Volpe National Transportation Systems Center in Cambridge, MA, and at the Federal Railroad Administration in Washington, DC.*

MC 2-1.2

Comment: EPA recommends implementing a Green Lights program as part of the NEC electrification project.

Response: *Such a program is part of the mitigation included in the Proposed Action. (See Volume I, Section 5.1.1(e) of the FEIS/R*

MC 2-1.3

Comment: Additionally, EPA encourages DOT to identify and incorporate into this project any other suitable pollution prevention measures.

Response: *Comment noted. See Section 5.1.1(i) and 5.1.1(l) of Volume I of the FEIS/R.*

MC 2-1.4

Comment: EPA encourages DOT to further evaluate whether other environmental impacts from the proposed project,

including noise, vibration, and electromagnetic fields (EMF).

Response: *Further evaluation of these impacts has been completed as is presented in Volume I, Sections 4.4 and 4.5 of the FEIS/R.*

Federal Emergency Management Agency (FEMA)

MC 2-2.1

Comment: It is our recommendation that the Stonington Paralleling Station be removed from "Zone V" and the site be relocated outside of a designated flood hazard area, unless it is shown that there are no practicable alternatives to locating the station at that site.

Response: *This issue has been coordinated with FEMA and it has been concluded that no alternative site is feasible. See correspondence in Appendix I of Volume I of the FEIS/R.*

MC 2-2.2

Comment: The Richmond Switching Station is proposed to be constructed in "Zone A." In Zone A, NFIP regulations Section 60.3(b)(3) state that the community shall:

"Require that all proposed development greater than 5 acres include within such proposals base flood elevation data."

Response: *The Richmond switching station has been relocated approximately 1000 feet west of the original location, which was adjacent to the Pawcatuck River. The new site is located approximately 440 feet east of Meadow Brook.*

The current location is not expected to impact the wetlands or buffer zone associated with the Pawcatuck River or Meadow Brook. Impacts to the Meadow Brook 100 year flood plain have been calculated to total 1850 cubic yards of lost flood storage volume. According to the Rhode Island Freshwater Wetlands Act (Section 2-1-20(c)), compensation for this

encroachment will be required.

Compensatory storage must be equal to or greater than the volume of fill, have an unrestricted hydraulic connection to the stream and wetland, be located as close to the project site as possible, and must be completed prior to project construction.

MC 2-2.3

Comment: If such occurs, the DOT should determine the impact of such reconstruction and its affected regulatory floodways. Paragraph (d)(3) of NFIP Section 60.3 states that the community shall: "Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway."

Response: *Comment noted.*

U.S. Coast Guard

MC 2-3.1

Comment: The proposed electrification and increase in passenger train service frequency will adversely impact marine traffic unless provisions are made to minimize intermodal conflicts between vessels and railroad operations.

Response: *Comment noted.*

MC 2-3.2

Comment: Based upon all the above concerns it is suggested that a series of meetings be scheduled to explore these concerns and develop viable solutions and procedures that can be addressed in the FEIS and implemented during both the construction and operational stages.

Response: *Subsequent to release of the DEIS/R, FRA and the Coast Guard entered into discussions regarding the potential impact on marine traffic passing through the moveable bridges. The mitigation identified in Volume I, Section 5.1.1(i) of the FEIS/R was developed as a result of these discussions.*

MC 2-3.3

Comment: I am willing to also investigate and consider drawbridge regulation changes that do not unreasonably interfere with marine needs where deemed necessary and appropriate to facilitate intermodal transportation.

Response: *Comment noted.*

MC 2-3.4

Comment: Additionally, I must advise you that based upon the configuration changes made to the fixed and moveable bridge structures, bridge permit application may be required. The data supplied, to date, is inadequate to evaluate this issue.

Response: *Based on the discussions between FRA and the Coast Guard, it was determined that certain permits would be required. Amtrak will coordinate with the Coast Guard during the final design process to develop the appropriate documentation required for the permitting process.*

MC 2-3.5

Comment: Efforts should be made to take comments from the marine public whenever a change in train scheduling is proposed.

Response: *FRA believes that effective notification of the marine public should be part of the bridge operating plan required as mitigation in section 5.1.1(i).*

Dept. of the Army

MC 2-4.1

Comment: We request that these rail line clearances be preserved over the respective designated portions of the Corridor.

Response: *The proposed project will not reduce the existing clearance of any bridge. Amtrak is required to maintain certain vertical clearances for high and wide freight operations in accordance with the U.S. Department of Transportation's agreement of November 30, 1978, Clearance Route*

Diagrams. Amtrak has asserted that those vertical clearances will be protected as part of the electrification design and construction. Existing widths will not change and vertical clearances will be preserved by either raising the overhead bridges or by lowering the tracks. Special rail car profiles should be discussed with Amtrak's Clearance Engineer prior to movements to ensure safe operations.

Dept. of the Army

MC 2-5.1

Comment: According to 40 CFR 1502.14 the alternatives section should present the environmental impacts of the alternatives in comparative form and rigorously explore and evaluate alternatives.

Response: *Volume I, Chapter 4 of the FEIS/R presents the environmental impacts of the reasonable alternatives in comparison format.*

MC 2-5.2

Comment: Where appropriate, the EIS should indicate those measures to minimize impacts that "will be implemented" rather than "could be implemented".

Response: *The mitigation identified in Volume I, Sections 5.1 and 5.2 of the FEIS/R are those FRA proposes to require in its record of decision on this project.*

Federal Aviation Administration

MC 2-6.1

Comment: We suggest that the noise or transportation sections of the study, where train noise is evaluated, take credit for the decrease in the aircraft noise environment. Given the number of shuttle flights, this could be significant.

Response: *The Proposed Action will have many indirect benefits such as improved noise and reduced highway traffic around Boston and New York airports. However, such indirect benefits are difficult to quantify and were not specifically identified as a benefit of this project.*

MC 2-6.2

Comment: The catenary structures associated with electrification may act as obstructions to several airports in close proximity to the route. The DEIS notes, for example, the proximity of Groton-New London Airport.

Response: *Amtrak will coordinate the placement of catenary support structures in the vicinity of airports with the FAA and local airport officials.*

Blackstone River Valley Commission

MC 2-7.1

Comment: We have reviewed the proposed improvements and the anticipated impact to resources, both cultural and natural. Staff generally agrees with the findings of the report: with the exception of the Blackstone River Railroad Bridge in Pawtucket and the Central Street Pedestrian Viaduct in Central Falls, other resources do not seem likely to be adversely affected. We would request involvement in on-going review of these historical features as mitigation measures are discussed.

Response: *Comment noted.*

Amtrak

MC 3-1.1

Comment: While we project a service program of 26 daily round trip trains by the year 2010, it remains unclear when this service level will be achieved. Excess noise may or may not remain an issue at that time. Mitigation of impacts from construction and operation of the electrification system (e.g., avoiding construction in wetlands; addressing historic preservation concerns, etc.) must be undertaken at the time of construction. This is not the case, however, with mitigation intended to address potential future problems resulting primarily from increased train service. Amtrak submits that it is more appropriate to address these types of problems if and when they arise rather than to commit significant financial resources now to solve problems that may never materialize.

Response: *The mitigation measures identified in*

Volume I, Sections 5.1 and 5.2 are designed to mitigate the identifiable adverse impacts associated with extension of electric traction between New Haven and Boston. Measures to mitigate impacts that result from NECIP as a whole or from the action of others such as an increase in commuter traffic, are incorporated in the Northeast Corridor Transportation Plan.

MC 3-1.2

Comment: The DEIS recognizes the importance of preserving freight service on the Northeast Corridor and indicates that the Federal Railroad Administration's Program Master Plan for the New York-Boston rail line (FRA Mater Plan) will address steps necessary to preserve freight service and permit its growth. Amtrak believes that this is the appropriate way to address this issue.

Response: *Comment noted.*

MC 3-1.3

Comment: Amtrak is concerned that the DEIS merely repeats assertions made by the Providence and Worcester Railroad that "additional operating costs and potential loss of new business related to schedule and height restrictions could result in an annual revenue loss of \$900,000 and cause the P&W to cease operations on the [Northeast Corridor]." At a minimum, the FEIS should emphasize that the FRA has not independently reviewed the accuracy of this statement. Indeed, Amtrak believes that inclusion of this statement in the DEIS is not appropriate without a more detailed analysis of the basis on which the P&W's statement was made.

Response: *The FEIS/R notes that this information comes from P & W, just as it notes that much of the data in the report comes from Amtrak. Where original research was performed as part of this project, it is so noted. All other data is referenced to its source.*

MC 3-1.4

Comment: In addition to the above comments, Amtrak's letter provides their input on

several of the issues raised during public hearings on the DEIS/R. As these are not comments on the DEIS/R, but rather comments on DEIS/R issues, they are not abstracted separately. The reader is referred to Amtrak's letter (MC 3-1) in Volume IV to review Amtrak's comments on these issues.

Response: *Comment noted.*

Alternative Rating Systems

MC 3-2.1

Comment: This writer requests an extension on the deadline for comments on the DEIS.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Train Riders of Northeast

MC 3-3.1

Comment: This writer supports the project because it will bring economic expansion to the region.

Response: *Comment noted.*

Cummins Engine Co.

MC 3-4.1

Comment: The specific weight of Amtrak diesel-powered equipment is approx. 1 ton/seat, whereas modern self-propelled trains are built with aircraft technology to about .5 ton/seat e.g: ABB, Duewag ET A1, & Star 21, (the replacement for Shinkansen trains now under test).

Response: *New passenger train designs tend to be less weight than has historically been the US experience. However, for safety purposes the FRA maintains stringent structural strength requirements for passenger trains. Examples of new passenger train designs include the IC-3 which has been identified as "an attractive option as a feeder train bringing passengers to the high-speed railway service currently being set up around Europe." The operational speed of 160 km/hr is less than the operational goal speed of the U.S. built General Electric AMD 103 (see section 2.4.1.1). The current IC-3 diesel meets some of*

the requirements identified under the FF-125 (see section 2.4.1.2.) however, it can not meet the FF-125 operational speed of 200 km/hr and crush strength required. The IR-4 is an all electric version of the IC-3 train set. This train has an operating speed of 160 km/hr. The IR-4, in its current configuration, is not comparable to the existing AEM-7 which currently operates at speeds up to 200 km/hr. The Shinkansen STAR-21 is still an experimental articulated drive system that is currently being tested in Japan. Only limited results are available. Proposals for FRA's high-speed non-electric locomotive program (described as FRA-150 in the FEIS/R) may include a mix of technologies from all of these train types.

MC 3-4.2

Comment: The environmental pollution impact of EPA certified engines with exhaust after-treatment is orders of magnitude less than Amtrak locomotives.

Response: *A goal of FRA's high-speed non-electric locomotive program is to facilitate development of equipment with low air pollutant emissions. It is recognized that recent technological advancements offer opportunities in this area, however to date these technologies have not been demonstrated in advanced high-speed equipment. The ability of such technologies to realize their potential will not be definitively known until a prototype is built and tested. The potential for advanced designs to significantly reduce air pollutant emissions is discussed qualitatively in the context of the No-Build Alternative -- FRA-150 scenario. Amtrak's AMD-103 diesel locomotive began entering service in 1993 and this will form the backbone of Amtrak's diesel fleet for the foreseeable future. As a consequence, emissions from the AMD-103 were used as the No-Build Alternative base line.*

MC 3-4.3

Comment: The combined effect of clean engines and lightweight equipment would lower the energy use by 4 times over the proposed electric scheme, in terms of BTU/seat

mile, while reducing the capital cost by several orders of magnitude.

Response: *Volume I, Section 4.6 of the FEIS/R presents revised energy consumption estimates for all of the alternatives. As with air pollutant emissions identified above, recent technological advances offer the opportunity for improved fuel consumption. This is recognized in the context of the No-Build Alternative -- FRA-150 scenario. However the ability to realize the potential of technological advances in the context of a high-speed locomotive will not be known until a prototype is built and tested.*

MC 3-4.4

Comment: A study of the air transport industry will show that all improvements in performance, cost and safety have been due to equipment technology, which regrettably seems to have been completely ignored in your study.

Response: *FRA recognizes the opportunities offered by technology to improve intercity rail operations in the areas of performance, safety, and cost. This is evidenced by FRA's Next Generation High-Speed Rail technology development program contained in the Department's High-Speed Rail Initiative. A potential product of that technology development program, the high-speed non-electric locomotive, is discussed in this FEIS/R as the No-Build alternative -- FRA-150 scenario.*

Alternative Rating Systems

MC 3-5.1

Comment: This writer asks for an extension on the comment period.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

MC 3-5.2

Comment: Please inform us of any work currently underway.

Response: *No work is underway as part of the electrification project, although other NECIP work has been underway in the*

study area since 1978.

MC 3-5.3

Comment: Please inform us of the contact at EPA who is involved in this DEIS and proposal.

Response: *See Comment MC 2-1.1.*

Cummins Engine Co.

MC 3-6.1

Comment: This writer asks for an extension on the comment period.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Gannett Fleming

MC 3-7.1

Comment: This writer provides information comparing potential ridership between the "no-build/existing service" and the Maglev system.

Response: *The current state of maglev technological development is discussed in Volume I, Section 2.2.2 of the FEIS/R. This technology is not yet advanced enough to serve as an alternative to the Proposed Action.*

National Assn. of R.R. Passengers

MC 3-8.1

Comment: This writer supports the project on the grounds that it will increase ridership, enhance the environment, and is more efficient.

Response: *Comment noted.*

Amtrak

MC 3-9.1

Comment: [This letter presents Amtrak's response to the Massachusetts Highway Department's comments on the DEIS/R. Please see the letter in Volume IV for these responses.]

Response: *No response required.*

Cummins Engine Co.

MC 3-10.1

Comment: The report's conclusion that a locomotive-

hailed, electrified train of the X-2000 type is the best equipment alternative for the NHSRIP is not supported by data. Our data [See letter MC 3-10 in Volume IV], do not support that conclusion, and in fact show that technology exists to reach the desired performance with about 1/3 the energy consumption, and less environmental and track damage than the proposal.

The report uses BTU/passenger mile to compare energy use. This ratio can be confusing, as it mixes measurable units (miles and BTUs), with a purely speculative unit (passengers). Trains use almost the same amount of energy regardless of the number of passengers who elect to ride.

Response: *The energy analysis in Section 4.6 of the FEIS/R uses a number of different metrics to compare alternatives, including BTU/seat-mile.*

The FEIS/R recognizes that recent and future advances in technology could permit development of a high-speed non-electric locomotive with significantly enhanced energy efficiency when compared to existing passenger locomotives. One of the goals of FRA's proposed high-speed non-electric locomotive development program is to facilitate development of equipment that exploits the potential for improved energy efficiency. However this program faces technical and financial challenges as outlined in Section 2.4.1. When, or if, this program will achieve its goal is unknown. The FEIS/R also points out that the potential for improvements in the energy efficiency of electric locomotives exists in such areas as regenerative braking which will be incorporated into the Proposed Action's design.

MC 3-10.2

Comment: The report does not examine root causes of ground vibration & track damage, or track and catenary maintenance costs. These factors should be included in any evaluation of equipment alternatives.

Response: *The root sources of ground vibration*

from train operations are the rolling interaction and impacts of the train wheels on the track rail. This vibration increases with increased train speed, increased weight of the rail vehicle components and increased roughness of the wheels or rail. As discussed in Section 4.4 of the FEIS/R, project noise impact is evaluated for a range of conditions based on ground vibration measurements for existing AEM7 electric locomotive-hauled trains, as well as for the Swedish X2000 tilt train and the German InterCity Express (ICE) trainset in demonstration programs on the Northeast Corridor. Using the measurement results, vibration for the worst-case alternative is based on data for the AEM7-hauled trains while vibration for the best-case alternative is based on data for the X2000 trainset.

Amtrak has shown over the last 10 years that it can successfully maintain a high-speed rail line with electric traction (NEC -- Washington to New York City) under traffic levels greater than those anticipated in the study area. As a consequence, the impact of different equipment configurations on the cost of maintenance becomes an economic, not an environmental issue.

MC 3-10.3

Comment: Diesel engines can be more efficient than electric, and have less of some types of air pollutant emissions.

Response: *Energy consumption of the alternatives is addressed in Volume I, Section 4.6. Air quality is addressed in Section 4.10.*

MC 3-10.4

Comment: Noise reductions are possible with new designs.

Response: *Realizing these potential reductions of noise emissions is one of the goals of FRA's high speed non-electric locomotive development program.*

MC 3-10.5

Comment: Unsprung weight is one of the causes of vibration and research is needed in this area.

Response: *Vibration impacts of the alternatives are discussed in Volume I, Section 4.4 of the FEIS/R.*

Alternative Rating Systems

MC 3-11.1

Comment: The DEIS fails to meet the mandates of NEPA, inter alia, because it does not adequately assess reasonable alternatives, adverse environmental impacts, and economic costs.

Response: *The DEIS/R and the FEIS/R evaluate the reasonable alternatives to the Proposed Action and are consistent with the letter and intent of NEPA and the regulations implementing NEPA.*

MC 3-11.2

Comment: It is but a "bare minimum" attempt to comply with NEPA (in plain language, just what you think you can get away with) and is, in fact, a superficial and deficient assessment based on resulted orientated analysis and outdated studies. It even fails to note Amtrak studies on reasonable alternatives! It is, therefore, an abuse of agency "discretion", and constitutes an arbitrary, unreasonable and capricious agency action that does not comply with NEPA's requirements.

Response: *Comment noted.*

Conrail

MC 3-12.1

Comment: Please be advised that Conrail has reviewed the document and essentially has no comments. Our operations are mainly north of Attleboro into Boston. Although we would like to insure that sufficient overhead vertical clearance is provided for double-stack or tri-level service. We have no service presently of that nature.

Response: *Comment noted.*

Alternative Rating Systems

MC 3-13.1

Comment: We note the failure of the Draft DEIS/R to adequately consider health risks associated with exposure to electric-magnetic fields as studied by Swedish epidemiologist Maria Feychting and

Anders Ahlbom. Their published studies show a fourfold increase in the risk of leukemia among children who live or travel near electric power lines, transformers, and substations.

Response: *The study by Feychting and Ahlbom is one of several relevant epidemiologic studies of children evaluated and considered together to assess the health impact of exposures from this electrification project. The study reported that children with leukemia were more likely to live in homes where average annual fields from a transmission line adjacent to the property were above a certain level, however, leukemia was not reported to be associated with the magnetic field level measured in the home. The study did not address transformers, or substations, or travel near electric power lines.*

Because several commenters asked about this epidemiology study and related issues, a separate study, Analysis of EMF Impacts on Children, has been prepared for the FEIS/R. Information contained in this additional study is presented in Volume I, Section 4.5 of the FEIS/R. Also see Response 3.5 in this volume.

MC 3-13.2

Comment: The DEIS fails to refer to the fact that Sweden's National Board for Industrial and Technical Development recognized the electromagnetic field link to cancer has acted to set safety standards for new power lines. (We suggest that an inexpensive unipolar magnet can shield those fields. See e.g., references cited therein).

Response: *The topic of safety standards in Sweden is addressed in the additional Technical prepared for the FEIS/R, Documentation of Occupational Studies of EMF. Information contained in this additional study is presented in Volume I, Section 4.5 of the FEIS/R.*

Although we actively monitor developments in Sweden and other countries on electric and magnetic fields,

no information indicates Sweden's National Board for Industrial and Technical Development has acted to set safety standards. Recently, the Swedish Trade Union Confederation published an informational brochure entitled "Cancer and Magnetic Fields in the Workplace" (Landsorganisationen i Sverige, 1994). As of the date of that document (May 1994), Sweden's National Occupational Health and Safety Board had not promulgated guidelines or occupational criteria.

Recently, four organizations in Sweden jointly published a brochure entitled "Magnetic Fields and Potential Health Risks" (May 1994). The brochure states that there are no limit values for magnetic fields. The four organizations are: Swedish Housing Department; Swedish National Electrical Safety Board; Swedish Social Welfare Board; and the Swedish Radiation Protection Institute.

Providence & Worcester R.R.

MC 3-14.1

Comment: The DEIS states that the electrification project could have adverse effects on rail freight service and the businesses that rely on such service. It does not, however, offer a thorough or accurate assessment of the impacts and fails to identify or evaluate the mitigating measures necessary to ameliorate the adverse impacts. The DEIS couches the impacts on freight service as possibilities. It is indisputable that freight service will be adversely affected. Moreover, the DEIS does not evaluate the direct, indirect and cumulative economic effects of the electrification project as it pertains to freight transportation.

Response: *Volume I, Sections 4.9 and 5.1 of the FEIS/R present a revised discussion of the potential impacts of the Proposed Action on freight rail movements and associated economic impacts.*

MC 3-14.2

Comment: The DEIS mistakenly relies on the Master Plan required to be produced by the FRA at the direction of Congress to suggest mitigating measures. The FEIS cannot

abdicate the responsibility to thoroughly address these impacts and identify appropriate mitigating measure prior to approving the commencement of the electrification project.

Response: *Section 5.1.1(i) of the FEIS/R identifies those measures incorporated into FRA's preferred alternative to address the potential of the electrification project to impact other rail users of the NEC main line. With the addition of these measures, the Proposed Action will not have a significant impact on existing freight and commuter operations.*

MC 3-14.3

Comment: The DEIS does not adequately address the impacts on current freight service and fails to make it clear that prior to the electrification project commencing, mitigating measures should be designed and implemented.

Response: *The FEIS/R contains an analysis of the potential impacts on freight service (and related impacts on shippers) that would occur if measures are not undertaken to provide additional capacity to the NEC main line. The potential for such impacts resulted in the incorporation into the preferred alternative of the mitigation identified in Section 5.1.1(i).*

MC 3-14.4

Comment: The DEIS incorrectly interpreted correspondence from P&W's General Counsel to the FRA. P&W estimates that approximately 900,000 of current operating revenues would be lost to diversions or relocations. This loss of revenue would make continued operations on the shoreline completely untenable.

Response: See response to Comment MC 3-14.3.

MC 3-14.5

Comment: The DEIS also suggests that construction impacts on freight service would be minimal (DEIS vol. I, p. 34, Vol. III, p. 2-14, 9-28). This is not true. The DEIS does acknowledge that the construction will disrupt the movement of high value overdimensioned cargo that are now

permitted to move in special trains at night only.

Response: *See MC 3-14.3.*

MC 3-14.6

Comment: P&W has identified the measures that are necessary to preserve freight service on the Corridor in Rhode Island and Connecticut as follows:

Construct a third track with vertical clearances of 20'7" above top of rail ("ATR") for freight trains from Boston Switch (M.P. 168.53) to Davisville, Rhode Island (M.P. 190.23).

Construct passing sidings between Davisville and New Haven at the following locations:

Kingston	Westbound	1 mile
Westerly	Westbound	1 mile
Waterford	East & Westbound	1.5 miles
Old Saybrook	East & Westbound	4 miles
Clinton	Eastbound	1 mile
Guildford	East & Westbound	2 miles
Branford	Westbound	1.5 miles

Maintain vertical clearances of seventeen feet (17') ATR and horizontal clearances to handle existing maximum car widths of twelve feet eight inches (12'18") from Davisville to New Haven for the movement of over dimension cargo.

Response: *See response to Comment MC 3-14.2.*

MC 3-14.7

Comment: Design modifications such as the relocation of catenary pole lines to permit the construction of additional track capacity and adjustments to track alignment should occur immediately.

Response: *The measures included in Section 5.1.1(i) provide that Amtrak's project will be designed and developed to accommodate possible future development by the state of Rhode Island of freight rail access*

with "double stack" clearances to the Port at Quonset Point.

MC 3-14.8

Comment: In light of the inability to move current volumes of freight on the Corridor due to the impacts of electrification, clearly there is no capacity to handle anticipated increased volumes generated by current users, which volumes will require additional switching time and additional trains.

Response: See MC 3-14.2.

MC 3-14.9

Comment: P&W projects a 51% increase in current regular local freight carloadings by 1997 in Rhode Island and a 245% increase in Connecticut. It is entirely inappropriate to consider the electrification project's impact on freight service by evaluating solely the level of usage now made of the Corridor. Many of the businesses using rail freight service expect to increase their business significantly. Clearly, these businesses increased freight needs must be met.

Response: *The measures identified in Section 5.1.1(i) are sufficient to accommodate expected growth in freight shipments by P&W's existing customers.*

MC 3-14.10

Comment: The inability to operate additional trains in daytime windows precludes the ability of Rhode Island to accommodate future expansion by existing users. This limitation will have a cumulative effect on the region's economy and should be thoroughly examined.

Response: See MC 3-14.2.

MC 3-14.11

Comment: No evaluation has been made of the ability to install switches for industry requiring freight services off the electrified territory.

Response: *The proposed action is not anticipated to have any impact on the ability to install switches for service off the main line.*

MC 3-14.12

Comment: The DEIS states that Amtrak plans to maintain the current published vertical clearances under overhead bridges on the Corridor. This approach is contrary to applicable law and has far reaching consequences for the region's economy.

Response: *The measures identified in Section 5.1.1(i) provide that Amtrak maintain freight clearances historically available (i.e., those clearances used by freight movements within the last 10 years).*

MC 3-14.13

Comment: Several studies have been done evaluating the economic impact of modern rail service to the Davisville/Quonset Point facilities in Rhode Island. The results of the studies are summarized in the document "Purpose and Need for Dedicated Freight Track and Improved Vertical Clearance from Quonset Point - Davisville to Boston Switch" prepared by the Rhode Island Department of Transportation which has been submitted.

Response: *Comment noted.*

MC 3-14.14

Comment: The DEIS contends that the port facilities at Davisville/Quonset Point would be in competition with port facilities in the New York City area. While it is true that Davisville/Quonset Point would offer services similar to other east coast ports, it is not true that Davisville/Quonset Point would compete with New York ports. This fact was confirmed in conversations with New York port officials. The reference to such competition should be stricken from the document.

Response: *Whether and with whom the proposed port development at Quonset Point would compete is not material to the issue of the possible impact of the Proposed Action on the State's ability to develop a freight connection to the port with double stack clearances. This issue is more appropriate for consideration in the RIDOT's ongoing EIS on alternatives to providing that access. As a consequence, the referred-to reference*

has been dropped from the FEIS/R.

MC 3-14.15

Comment: The DEIS fails to discuss the appropriate mitigating measures to address the impact of the project on clearance conditions. P&W strongly urges that the third track necessary to provide freight service with adequate track capacity be required to have clearance of 20'7". This measure would eliminate the need to clear both the catenary system and freight car requirements above the same track. In the alternative, Amtrak should be required to restore all existing clearance conditions and work with the States and P&W to remedy existing deficiencies on any portion of the Corridor between Boston Switch and Davisville which will be shared by freight and passenger service.

Response: *See response to Comment MC 3-14.7.*

MC 3-14.16

Comment: It is not even true that Amtrak is planning to maintain existing advertised clearances. Amtrak plans to reduce clearances to 16'2" to 16'8". P&W currently moves over dimensioned cargo between New Haven, CT and Davisville, RI of 16'10". Until last year, it moved Plate F-17' high cars until Amtrak unilaterally and without notice, reduced the clearance by raising the track under Millstone Point Road. Clearly, to protect existing freight traffic, Amtrak must restore the 17' clearance on this route.

Response: *See response to Comment 3.14.12.*

MC 3-14.17

Comment: The DEIS states that 330 new permanent jobs are expected to be created and some modest (when compared to the no-build alternative) reduction in emissions will be achieved by the project. FRA's Draft Master Plan states that Amtrak will realize a net revenue increase of \$38 million dollars if projected ridership levels are reached. The failure of DEIS to thoroughly evaluate the direct, indirect and cumulative negative economic impacts on freight transportation and to identify mitigation measure for freight

service has far reaching economic consequences.

Response: *See response to Comment MC 3-14.3.*

Providence & Worcester R.R.

MC 3-15.1

Comment: I would urge you to thoroughly evaluate the impact of moveable bridges on freight service and would urge that coordinated operations be pursued with the Corps of Engineers or other agencies with jurisdiction over the bridges.

Response: *The relationship between rail operations and the five moveable bridges in Connecticut is discussed in Sections 4.2 and 4.9 of Volume I of FEIS/R. The mitigation of impacts in this area (see Section 5.1.1(i) involves development of an operating plan for the bridges that would be acceptable to the Coast Guard.*

Providence & Worcester R.R.

MC 3-16.1

Comment: [This comment provides information on two options for a third track from Central Falls to Davisville, RI.]

Response: *See response to Comment RI 1-7.1.*

Providence and Worcester R.R.

MC 3-17.1

Comment: It is my understanding that the comment period for the Draft Environmental Impact Statement has been extended. Due to the references in the DEIS about the FRA's Master Plan, I felt it was important to submit to you P&W's comments on the draft plan so that you can achieve a better understanding of the plan's deficiencies relating to freight service. I would ask that these comments be added to the comments on the DEIS.

Response: *This commenter submitted extensive comments on FRA's Northeast Corridor Transportation Plan (previously referred to as the FRA Master Plan. These comments have been reviewed, but are not responded to in this report as they are not substantive comments on the DEIS/R for electrification. To the extent that these comments related to potential impacts to NEC capacity as a result of the*

Proposed Action, they have been considered in the development of the mitigation contained in Section 5.1.1(i).

Alan R. Cripe

MC 4-1.1

Comment: Therefore I hereby request a delay in the deadline on written comments for all parties until January 15, 1994.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Albert L. Papp, Jr./George Haikalis

MC 4-2.1

Comment: [The first part of this comment provides much of the material the commenters later submitted as part of their paper "The Seven Myths of the Boston Electrification Project". This is addressed in Response to Comment CT Hearing 3.1.] Will the attainment of a 3 hour New York-Boston trip time be competitive with airline shuttles in the convenience of the interstate highway network in the 21st century?

Response: *Attainment of three-hour rail travel time between Boston and New York will make rail travel competitive with airline travel for those trips that involve airport access and egress times in the one-hour neighborhood, since door-to-door travel times by airline and rail will be closely comparable for many of these trips. Such trips presently represent a substantial share of all Boston-New York air travel. Similarly, three hour rail travel time will make rail service competitive with corridor automobile trips that originate or are destined "beyond" the end-point cities of Boston or New York, since door-to-door rail travel times are most likely to compare favorable to driving times for these trips.*

MC 4-2.2

Comment: Can the electrification of a 19th century curving infrastructure be cost justified when at least three other alignments (one using an abandoned track bed and the others on completely new headings) offer the longer term potential of a significant

trip time reduction in the 21st century?

Response: *See Response 3.1 in this volume.*

MC 4-2.3

Comment: If an updated, proven American designed train can meet Amtrak's 3 hour time goal in the short-term -- as it did 25 years ago -- should not this avenue be more fully explored, while pursuing longer-term options -- including electrification of alternative routings -- that have the capability to permit Amtrak to offer an even more marketable service in the 21st century?

Response: *Technology alternatives are discussed in Volume I, Sections 2.2.2, 2.2.3, 2.3.2, 2.4.1 and carried forward into Chapter 4 in the context of the No-Build Alternative FF-125 and FRA-150 scenarios. Alternative routes are discussed in section 2.2.4.*

With regard to an updated version of the United Aircraft TurboTrain as an interim step while long term options are explored again, it must be pointed out that such an option is not necessarily a short term one. There are no TurboTrains in operation or in production. The last TurboTrain was scrapped approximately 15 years ago. Its designers have stated that they have developed an improved design that provides better performance and eliminates the problems that Amtrak states the original TurboTrain had during its brief service with Amtrak. However, its designers also state that the advanced TurboTrain cannot be developed without Federal funding to complete its design, develop a prototype and conduct the necessary tests to demonstrate that it can achieve its designers' goals.

FRA does not have the discretion to use NECIP electrification funds for this purpose. As a consequence, an advanced TurboTrain design would have to be considered in the context of FRA's proposed high-speed non-electric locomotive development program. As stated elsewhere, there are both technical and financial uncertainties associated with this program. As a consequence, it

is unclear when, or if, this proposed program will reach a successful conclusion in the form of a non-electric locomotive with performance equal to or better than the best electric locomotives.

Albert L. Papp, Jr.

MC 4-3.1

Comment: We continue to believe that inadequate time was programmed into the schedule for the public review process given the voluminous scope, technical complexity, and comprehensive nature of the project and the wide ranging effects it will have on transportation planning, priorities, and economics not to mention the environment and user selection for generations to come. We request that this concern be duly noted and become a part of the official record in this proceeding.

Response: *Comment noted. In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Albert L. Papp, Jr.

MC 4-4.1

Comment: The DMJM/Harris study is fatally flawed because it completely ignores real world data, for whatever reason, and instead endorses an electrification project that is expensive, unnecessary and provides no value added to both the traveling public and the taxpayers alike over the achievable, cost effective CONEG suggestions, and the proposals we and others have placed before the United States Department of Transportation.

Response: *Comment noted. The paper referenced, "Seven Myths about the Boston Electrification Project" is discussed in the context of Comment CT Hearing 3.1.*

The comment also mentioned a Houston Post article dated October 22, 1988, discussing tests for the Coalition of Northeastern Governors (CONEG) and the report of a task force that discussed possible gas turbine-powered trains between Boston and New York City. The comment states that there is no mention of the electrification project planned by

Amtrak and implies that CONEG did not support electrification, at least at that time. CONEG maintains that since the creation of its high-speed task force in 1986, it has consistently supported the extension of electric traction on the Shore Line as part of the long term solution of the Northeast's transportation needs and that the discussion of the use of gas turbine trains was viewed as an interim measure until funding for electrification could be found (Ewing, 1994).

MC 4-4.2

Comment: [The commenter refers to an included technical paper that they wish to see included in the official record.]

Response: *See response to Comment CT-Hearing 3.1.*

MC 4-4.3

Comment: We respectfully request that high speed gas turbine and diesel trainsets which were dismissed in Volume I of the DEIS/R be reevaluated as candidates for high speed New York to Boston service.

Response: *See Response 3.2 in this volume.*

C. Duffy

MC 4-5.1

Comment: High voltage power is very damaging to the health of all people concerned especially children.

Response: *See Response 3.5 in this volume.*

Zory R. Glaser

MC 4-6.1

Comment: *(Vol. I, Page 4-21, Sect. 4.5.4) While helpful, I'm not sure that the best measure of electromagnetic (EM) interference (EMI) from the proposed Amtrak electrification of the NEC and its potential impact, is to contact the FCC or the Coast Guard regarding their experience with broadcast and communications (reception interference). Perhaps more significant might be the experience from hospitals, research organizations, and individuals (located close to the electrified portion of the rail line) with the possibility of interference experienced with sensitive

electromechanical (and similar/related) devices, especially biological and medical. Certain computer-related activities and operations also can be interfered with by EM fields. Also, perhaps important is the experience of individuals and organizations with sensitive navigational devices.

Response: *Our contact with the Coast Guard covered the topic of sensitive navigational devices. There are no hospitals located within 150 feet of the rail line. The DEIS/R estimates that the EMF levels are within background levels of EMF beginning around 40 feet from the rail line. In regard to computer devices, EMF levels generated by computers and their peripheral support devices are generally much stronger in close proximity to those devices than the levels projected to be generated by the proposed project. While this is not conclusive evidence that the project will not interfere with computer-related activities, it is consistent with the fact that such interference has not been reported as a significant problem related to electrified rail systems.*

MC 4-6.2

Comment: "(Vol. I, Page 4-19, Sect. 4.5.1) In my earlier comments I noted a number of statements relating to the biological consequences of, and human health effects resulting from, exposure to EM fields, made in the subject document, with which I strongly disagreed. In particular, I referred to section 3.5, (pages 3-10 through 3-13), entitled EM Fields and Interference). I also listed in my earlier comments a number of important literature citations to the bioeffects literature dealing with animal and human responses following exposure to 60 Hz EM fields."

Response: *The earlier comments on biological and health issues, Sections 3.5, and 4.5.1 have been addressed in Comment MC 4-8.18 and 4-8.19. The literature upon which Section 3.5 was based encompasses thousands of references; therefore, the DEIS/R includes the most recent and most significant studies as well as several*

recent comprehensive reviews (e.g. the Oak Ridge Report, Reference 1, Appendix B, Section 5, Volume III of the DEIS/R). The conclusions of the DEIS/R are consistent with these major reviews.

MC 4-6.3

Comment: "In light of this, I again feel it appropriate to restate my concerns regarding a number of the assertions made in sect. 4.5.1. In particular: (at the end of para. 1) "Studies of adults have not supported the suggested association between cancer and . . . magnetic field exposure." In fact, the biological and epidemiological data is suggestive of some association. We do not yet have enough data to make such a statement, but as individuals concerned with the public health consequences of exposure to electric and magnetic fields, I believe we have an obligation to adopt a conservative approach regarding exposure of large numbers of individuals to such EM fields. "

Response: *The comment in Section 4.5.1 refers to residential studies of adults, not all studies of adults. The paragraph concludes that studies of residential exposures of adults have not supported the suggested association. The next paragraph in that section addresses occupational studies of adults, which have reported associations between EMF and certain types of cancer (see also Section 5.2.3). The underlying issue in interpreting statistical associations reported in epidemiologic studies is whether these associations are indicative of a cause and effect relationship. Recent occupational studies are reviewed in the new technical study to be submitted with the FEIS/R, Documentation of EMF Occupational Studies.*

The commenter suggests a "conservative" approach be taken regarding exposure of individuals to magnetic fields associated with the project. However, as Table 4.5.2 shows, the exposure levels to the populations in any of the 3 zones is at least 100 fold lower than any of the exposure limits proposed in guidelines developed by scientific organizations.

MC 4-6.4

Comment: "Also at the end of the second paragraph, the statement ". . .in laboratory research, which exposes animals or isolated cells or tissue to magnetic fields which are thousands of times higher than those in the environment, no adverse biological effects have been found to occur." The author appears to be overlooking a large body of published, peer-reviewed literature which does demonstrate interaction and effects, many of which are considered to be adverse, and some which occur at exposure levels much lower than are likely to exist from the proposed electrification project. Consequently, I believe this statement is seriously in error, and is misleading."

Response: *The conclusions in the document reflect the results of a weight of evidence evaluation of the laboratory studies collectively, rather than focusing on individual, isolated studies. Several criteria were used to evaluate studies in the literature to develop these conclusions: 1) whether biological changes observed in the laboratory have been replicated in other studies to demonstrate their validity; 2) whether effects that are observed and replicated might occur at environmental levels; and 3) whether these biological changes might signify adverse effects for humans. The conclusions in the DEIS/R pertaining to laboratory research are consistent with recent reviews by other scientists in the United States, Denmark, and Great Britain.*

MC 4-6.5

Comment: "(Vol. II, Page 4-22, Sect. 4.5.4, Table 4.5-2) While I have earlier commented (in my Dec. submission, on page 6, under the heading of my response to section 3.5 of the document) on the high "average EMF exposures (mG)" experienced by employees (to 134 mG), and passengers in the station (to 209 mG), I also have some additional concerns. The "Relevant Interim Guideline (mG)" for exposure of various population groups to the EM fields, causes me some concern. Rail passengers (i.e., members of the public) are permitted as much EM exposure as

MBTA/Freight employees (an occupational exposure). Why are Amtrak and Conn DOT employees permitted/subjected to higher exposure than MBTA/Freight employees?"

Response: *The levels presented in the Table 4.5.2 for the ROW labelled relevant guidelines represent the ranges covered by a number of the "Relevant Guidelines" explained in Section 5.5.7 and Table 5-3. The levels for Amtrak and ConnDOT employees are higher on the upper range of exposure because the occupational guidelines proposed by the International Radiation Protection Association (IRPA) limit exposure to 50 G for a few hours of occupational exposure, and the German (DIN) guidelines limit exposures to 46 G but are for general exposures. Thus, the exposures limits in the interim guidelines relevant to Amtrak and Conndot employees may be higher, but they apply to limited time periods.*

The relevant interim guideline for rail passengers is the same as that for MBTA Freight Employees, because the guidelines for rail passengers and MBTA Freight Employees are for occasional exposures. The annotation to Table 5-3 in Volume III of the DEIS/R explains that MBTA and Freight Employees would be exposed only when passing under or working under an energized catenary section, because the trains themselves will continue to be diesel fueled trains after project completion.

Prompted by the comment, it is further noted that the IRPA guideline for general population exposure is more conservative, at 1 G for a 24 hour, day than the DIN (German) exposure guideline listed in Table 4.5-2. Nevertheless, the highest exposures that a passenger may be exposed to are many fold lower than this, and are not incurred for a full, 24 hour day.

MC 4-6.6

Comment: "Also, I'm not comfortable with these Interim Guidelines, and see no citation for the source of the guidelines. Who has

suggested these Interim Guidelines? To my knowledge, they have not been discussed by (or proposed by) the scientific or standards-setting groups I'm associated with. I'm further concerned with the statement made at the bottom of page 4-20 (sect. 4.5.3.2, Results of the Analysis), ". . . the estimated levels of exposure are one-thousandth. . . of the interim guideline," It appears that the author is suggesting that the "interim guideline" has already been accepted by the scientific and regulatory bodies, and has been demonstrated to provide the assurance of safety that society expects. Such is not the case."

Response: *The guidelines used in table 4.5-2 have each been developed by groups of scientists from national and international, scientific, and technical organizations, including the ACGIH TLV Committee of which the commenter is a member. The sources for these guidelines are listed in the references to Section 5.3 in Volume III of the DEIS/R, which are summarized in Table 5-2 of that section.*

MC 4-6.7

Comment: *"* (Vol.I, page 5-21, sect. 5.2.2.4, EM Fields, 1st para.) The statement is made to the effect that the earth's magnetic field is 500 mG, and although a static field, does slowly vary somewhat with time (as well as location, altitude, . . .). It is important to remember that the earth's magnetic field is not an alternating field in the sense of a regularly time-varying field (such as the 60 Hz magnetic field associated with the power used in most of the U.S.). It is also important to remember that man has evolved for millions of years in the earth's magnetic field, and the scientific literature from the past 25 years of man's space exploration has demonstrated that some subtle biological changes do occur in the absence of the earth's magnetic field, and/or in the presence of extraterrestrial EM fields. I mention this because many scientists do not believe it is appropriate to compare the earth's magnetic field with man-made EM fields, especially as to exposures and/or the possibility of (or absence of) biological effects."*

Response: *The approach proposed by the comment is the approach taken in the DEIS/R. Time varying and static fields are different and separate issues for purposes of biological and health changes. The last sentence of this paragraph on page 5-21 of the DEIS/R does specify that the earth's field is static, not time-varying. The comparison has been made merely for the purpose of providing perspective on the magnitude of magnetic fields discussed in the DEIS/R.*

MC 4-6.8

Comment: ** (Vol. I, page 5-21, section. 5.2.2.4, EM Fields 3rd para.) The statement ". . . to determine if any link exists between EMF exposure and health impacts. To date, the consensus of the scientific community is that there is not conclusive evidence that such a link exists." This statement is seriously in error, and is misleading. As I have noted earlier, a large body of scientific data exists which demonstrates that effects do occur as a result of exposure of biological specimens (cells, tissue, organs, and intact animals, including humans) to EM fields, even at very low exposure levels. The scientific community is divided as to which effects are to be considered adverse, exactly what exposure levels and exposure conditions are responsible for the effects, if the effects are reversible, the role of hereditary, diet, various physical, chemical, and psychological factors which often are present, and many other considerations. I believe it is more appropriate to state that there is no consensus within the scientific community as to whether there is or is not conclusive evidence that such a link exists."*

Response: *Comments on health impacts from magnetic fields have been previously addressed. Please also refer to the response to Comment 17, above. The reviews cited in Section 5 of the DEIS/R (Volume III), the additional technical studies for the FEIS/R (Analysis of EMF Impacts on Children and Documentation of EMF Occupational Studies), and the discussions in the ACGIH and IRPA*

documents, which explain the derivation of their exposure guidelines, are consistent with the conclusions in the DEIS/R.

MC 4-6.9

Comment: **(Vol.I, page 5-21, sect. 5.2.2.4, EM Fields, last para.) The statement "... magnetic field levels projected to result from the proposed project are well below the criteria established. . . , and as a result, no adverse impacts are anticipated. Again I believe the authors have made a statement which cannot be supported by the existing body of scientific literature, including the experimental biological data and the epidemiological data. There clearly is much debate on this issue by the members of the scientific community which has been performing the research, and by the regulatory, standards-setting/guideline-developing community, as well as the public, and the press.*

Response: *The standard scientific approach used to assess the potential health effects of any environmental exposure requires evaluation of all relevant epidemiologic and laboratory studies according to several criteria. These criteria include: quality of individual study methods, replicability, consistency of results, and biological plausibility. Although biological changes may be observed in cells and tissues, it does not necessarily imply adverse effects on human health. Additional criteria exist to guide scientists in evaluating epidemiological research for implications for public health.*

The views of the scientific community can be assessed by the reports of evaluations using these criteria prepared by various scientific groups. For example, the panel on Health Effects of Low Frequency Electric and Magnetic Fields/Oak Ridge Associated Universities concluded that the evidence was not indicative of health hazards from EMF. Similar conclusions were reached by reviews in 1992 and 1993 by groups of scientists in Great Britain, Denmark, France, Ireland, and international organizations such as the International Radiation Protection

Association.

Other comments on health impacts from magnetic fields have been previously addressed. Please also refer to the response to Comments MC 4-6..4 and MC 4-6.5, above.

MC 4-6.10

Comment: *"* Finally, does sufficient electrical power generating capacity presently exist for the proposed project, or will new power plants need to be constructed to handle the proposed electrical load?"*

Response: *No additional power plants would be required as a result of the Proposed Action. The projected power demand of electric operations that would be required with the 2010 level of rail operations would be less than 1 percent of the total summer peak demand projected for the NEPOOL region in 2007, the farthest out that the utility group predicts.*

Unknown

MC 4-7.1

Comment: *The statement that there will be one hour less traveling time is not true. The amount of time it takes to change engines is the same amount of time it takes to board the train.*

Response: *Eliminating the change in locomotives in New Haven is just one component of the total plan to reduce Boston to New York City trip times to less than three hours. The Proposed Action also contributes with its ability to accelerate more quickly coming out of curves and higher peak speeds. Other projects are listed in Table 1.1-1(a) in Volume I of the FEIS/R.*

MC 4-7.2

Comment: *The electromagnetic fields that high-voltage wires generate are suspected of damaging human health.*

Response: *See Response 3.5 in this volume.*

MC 4-7.3

Comment: *There is a potential risk of children being injured by playing near high-voltage*

wires. What are the statistics of injuries in towns with these structures.

Response: *The catenary will generally be over 20 feet above the track and therefore possible access to this system by children playing nearby would be restricted to bridges over the rail line. In these areas, barriers will be installed to limit access. With regard to statistics, FRA is not aware of a data base tracking this issue.*

MC 4-7.4

Comment: The New Haven Repairs and Motor Storage jobs, which are fairly high paying jobs, will be eliminated putting many local residents out of work.

Response: *Because Amtrak will not be required to change locomotives for its Boston-Washington trains in New Haven following completion of the electrification system, New Haven no longer will serve as a crew change base. This will result in a reduction of up to 51 "train and engine crew" (T&E) employees in New Haven. (Other T&E jobs, relating to Shore Line East commuter service, Amtrak service to Springfield and Inland route service to Boston, and Montrealer service, will remain even after electrification). However, total T&E employment will grow due to the addition of 16 round trip Metroliner trains between Boston and New York. These additional jobs will be crewed out of Boston and New York and likely will be filled by some of the employees living currently working out of New Haven. The loss of T&E jobs in New Haven will be offset by additional Connecticut employment related to additional ticket agents in Stamford, Bridgeport, New Haven and New London, additional track maintenance requirements, and the need for employees to maintain the new electrification system and growth in Shoreline East commuter service.*

Zory R. Glaser

MC 4-8.1

Comment: (Sects. ES.2.2.2, 1.6, 1.4.4.2, and 2.4.2.4) What will be the magnitude of the electric (E) and magnetic (H) fields on the "225

roadway bridges" and roadways and to the "15 at-grade crossings" (where vehicular and pedestrian traffic exists) which cross over (and "220 railroad bridges over road, railroads, walkways, and watercourses") the 2 x 25 Kv ("effectively a 50 Kv system") overhead catenary system (OCS) containing the 25 Kv feed wires (and potentially the cables from the Switching and Paralleling Station to the OCS)?

Response: *The strengths of electric and magnetic fields in these crossing areas will not significantly differ from the estimated and measured field strengths presented in Volume III of the DEIS/R (Section 5.5). Persons traversing the tracks at grade would be expected to be exposed to magnetic field strengths similar to exposure levels of a rail passenger, or up to approximately 26 mG. Persons traversing the tracks via a bridge would be expected to be exposed to magnetic field strengths similar to exposure levels on station platforms, or up to approximately 210 mG (as described in the DEIS/R). However, actual field strengths would depend on specific electrical conditions at the time, the exact distance away from the catenary system, and the structural features in the vicinity which will tend to influence field strengths.*

MC 4-8.2

Comment: (Sect. ES.2.2.2) How much new 115 Kv Power Supply line and tie-in from the Utility Companies to the 4 Substations (i.e., Transmission Line (TL) will need to be constructed? Will a separate EIS be submitted for that construction? Have the routes for the 115 Kv Power Supply lines and tie-ins/TIs been decided upon, and the affected communities notified? How much of the 115 Kv Power Supply lines and tie-ins/TIs will be located in existing rail right-of-ways (ROW)?

Response: *About one (1) mile of new 115 kV Power Supply line/Tie-in will be constructed. There is no separate EIS contemplated for this portion of the project. The routes for the 115 kV have been decided and the affected communities have been notified.*

Minimal, if any, of the 115 kV Power Supply lines and tie-ins/TLs will be located in existing rail right-of-ways.

MC 4-8.3

Comment: Have the E and H field components (which will be generated) from the 115 Kv Power Supply lines and tie-ins/TLs been added to the E and H field values predicted for the 25 Kv OCS and feed wires in the ROWs?

Response: *The estimated magnetic field intensities associated with this project are presented in Section 5.5 of the DEIS/R, Volume III. The interaction between these two magnetic field sources (tie line and catenaries) occurs at the substation locations. Due to complex circuitry at these locations, mathematical estimates of field strengths would be questionable. To assess magnetic field strengths at these locations, the DEIS/R used actual field measurements in and around existing substations. The magnetic field strengths for substations are presented in Section 5.5.4.*

MC 4-8.4

Comment: How much new ROW will be required for the 115 Kv Power Supply lines and tie-ins/TLs?

Response: *About one half mile of new right-of-way will be required for the 115 kV Power Supply lines and tie-ins/TLs.*

MC 4-8.5

Comment: Have the E and H field components from the 115 Kv Power Supply lines and tie-ins/TLs which will be located on new ROW been predicted?

Response: *The magnetic fields generated from the 115 kV power supply lines have been estimated and are presented in Section 5.5.1 of the DEIS/R, Volume III.*

MC 4-8.6

Comment: How many existing high voltage TLs will cross, be crossed, or be co-located with the 115 KV TLs, or with 25 (or 2 x 25) Kv lines associated with the proposed electrification project? (At least two existing 345 Kv power lines are referred to in Sect.III/1.2.1.11). Have the E and H

field components from these other existing TLs been considered in the prediction of the EM fields associated with the proposed electrification project?

Response: *Section 5 of the DEIS/R estimates the additional levels of EMF above and beyond background levels to which persons in the vicinity of the project would be exposed. The resulting total magnetic field strength from both background sources and this project has not been estimated. Instead, data is presented in Section 5 of the DEIS/R (Volume III) to provide separate field strength estimates for sources associated with the project and sources associated with typical background levels. Under worst case conditions, the estimated field strengths associated with the project would be added to background levels to determine total field strength during the period that the catenary is active. However, due to effects of field (phase) cancellation and shielding from buildings or other objects, it is expected that the resulting magnetic field strengths from the project and from background sources will frequently be less than the sum of their individual field magnitudes.*

MC 4-8.7

Comment: How many of the existing TLs are planned for upgrading in the next 10 years?

Response: *None of the existing TLs are planned for upgrading in the next 10 years as a result of the Proposed Action.*

MC 4-8.8

Comment: How much additional power generation by the utilities will be necessary for the proposed electrification project?

Response: *See response to Comment CT 4-6.10.*

MC 4-8.9

Comment: (Sect. ES.2.2.2) How much 25 Kv (and 2 x 25 Kv) catenary wire will be constructed along the approx. 156 miles of dual (with sections of tri- and quad-) track of the 'Shore Line' portion of the Northeast Corridor (NEC), (including

along feeder track, switch- offs, station multi-track, freight yards, maintenance areas, storage track, service track, turnaround facilities, and other track), and cabling between the (4) substations, the (18) paralleling stations, and the (3) switching stations and the associated OCS feed cable?

Response: *Based on preliminary design, there will be approximately 1000 miles of 25 kV catenary wire installed.*

MC 4-8.10

Comment: (Sect. ES.5.2) Regarding the statement (on page ES -7): "No adverse impacts are anticipated in the areas of socioeconomics, energy and electromagnetic (EM) fields and interference." I especially question the statement, in light of my review of the technical data presented in the draft EIS, and the statement made on page 3 -5 (Section 3.2, Socioeconomics) "The proposed project has the potential to increase noise and vibration, electromagnetic fields, ...". Perhaps the apparent inconsistency between these statements can be clarified.

Response: *Clearly any project of the magnitude of the Proposed Action will have impacts to some degree in all or almost all areas of concern. The statement in the DEIS/R was intended as a summary statement and reflected the general conclusion of the magnitude of project impacts in those areas of study in the context of a major infrastructure undertaking.*

MC 4-8.11

Comment: (Sects. ES.5.2.3 and 3.4) How much audio noise will be generated by corona discharge from the 115, 25, and 2 x 25 Kv Lines, especially during certain climatic periods (e. g ., high humidity, fog, rain, snow)? I see no mention of the corona discharge issue in the document (Sect. III/ 4.4. 7). Also, has an estimate been made of the amount of ozone which will be generated by virtue of the corona discharge? Will this produce a significant impact on the Air Quality (Sect. ES.S.2.)? Will the amount of vibration increase by virtue of the corona discharge?

Response: *Ozone formation does occur in the immediate area of the catenary cable and from sparking between the wheels and rails of an electric powered locomotive. The quantities of ozone formed from sparking from electric locomotives have not been measured; however, these amounts are thought to be minute. In fact, ozone resistant materials are used for the pantograph and cabling, and tolerances for gaps between these components are very restrictive in order to minimize corona sparking, loss of power, and ozone formation. High quality, well maintained wheels and continuous welded rails are also used to minimize sparking and loss of power.*

These minuscule amounts of ozone generated in the immediate vicinity of the sparking dissipate rapidly in the ambient air, and are not sufficient to cause measurable increases in the measured ozone levels in the region.

MC 4-8.12

Comment: (Sect. ES.5.2.5) What will be the extent/magnitude of pedestrian exposure to the E and H fields at the crosswalks, on the station platforms, and at the "approximately 22 locations along the ROW at which pedestrians cross the tracks" directly under the 2 x 25 Kv OCS and feeder cables? Also, what exposure to the E and H fields will be received by passengers on the train? Have measurements of the E and H field exposures received by passengers been made within the rail cars on the present electrified rail segments? How does this EM exposure change when the train passes under existing high voltage TLs? Will this exposure change upon the addition of the new 1 15 Kv Power Supply Lines and tie-ins/TLs?

Response: *Studies have been conducted by and for the FRA which assess the potential magnitude of EMF generated by the current and future electrification of the NEC, as well as EMF generated by other train systems. The studies have addressed EMF within the train, on the station platform, and along various locations of the NEC and associated*

electrical feeder lines. The results of these studies are presented in Volume III of the DEIS/R, Section 5.5. Additional clarification is provided in the response to Comment 1 (MC 4-8.1) earlier in this document. Also see Volume I, Section 4.5 of the FEIS/R.

MC 4-8.13

Comment: (Sect. ES.5.2.8) Regarding the safety aspects of the 1 15, 25, and 2 x 25 kV lines, the OCS system, and the associated feeder lines: What is the susceptibility to damage to the catenary, the support structures, and the feeder cables and support wires, from high winds, ice formation, falling trees and limbs, flooding, truck/auto and other vehicular collision on roads and overpasses, boat/barge collisions at water crossings, aircraft, etc.? I notice that Sect. 4.8.2 (Public Safety Impacts) does not discuss any of these points. What will be the annual maintenance cost estimates for the 115, 25, and 2 x 25 Kv Lines, the OCS system, and the associated feeder lines and support structures?

Response: *The electrification system will be constructed to minimize the susceptibility to damage from external forces:*

1. *The catenary is designed to withstand high winds (see response to CT 1-4.7). Span lengths are shortened as appropriate to reduce wind loadings.*
2. *The catenary system is designed to fully support 1/2 inch of radial ice with no impact to the system. Amtrak will also employ ice scraper service when severe icing is forecast.*
3. *All electrification facilities (substations, paralleling stations and switching stations) will be constructed outside flood plain parameters with the exception of New London, Leetes Island and Stonington facility sites. All catenary poles will, by necessity, be constructed along the track. The catenary poles will be unaffected by*

flooding unless the track structure is completely washed away at the pole location. Amtrak is limiting the number of poles that will be installed along causeways to minimize the exposure to flooding.

4. *The catenary system will be constructed directly over the tracks. At highway over-passes, the catenary system will be installed over the tracks and underneath the overpass with shielding on the bridges to protect the catenary. There will be no access for vehicles using the highway overpass to come near the catenary system.*
5. *At level crossings the catenary system will be installed at 23.0 feet in compliance with State and Federal regulations which is substantially higher than the maximum permissible [load heights] on the highways.*
6. *The catenary system will be attached directly to the movable bridges. Accordingly the catenary system will move with the movable bridge and will not be accessible to boat/barge traffic when the bridge is opened. When the bridge is closed the catenary system will be above the movable bridge and will not be accessible from the water.*
7. *The highest portion of the catenary system will be in the order of 35 feet above ground and will not provide a hazard to low flying aircraft.*
8. *Estimated maintenance cost.*

MC 4-8.14

Comment: (Sect. 3.5) EM Fields and Interference. For the 2 x 25 Kv catenary operated at a typical electrical load (as yet unspecified in the document), what are the predicted (and measured) E and H fields in the three zones (listed on p. 3 -11), at a height above the earth of 3 ft.?

Response: *The estimated EMF levels for the three zones assume a height of between 3 and 4*

feet, the range of antenna heights reported in the studies used as the basis of the estimates. Also, Section 5.5.3 of the DEIS/R presents EMF data at three heights above ground 25 feet from rail side: 10 cm (0.3 feet), 110 cm (3.6 feet), and 160 cm (5.2 feet). The average EMF values at those heights are 6.4, 7.4, and 7.9 mG, respectively, implying that the estimated EMF levels might be increased by around 7 to 10 percent to estimate adult exposure at head level or reduced by 13 to 15 percent to estimate exposure zones lower than around three and one-half feet. These adjustments, if applied, would not significantly alter the estimated exposures or the study's conclusions.

MC 4-8.15

Comment: How do these E and H values change (increase) as the electrical load increases on a line segment?

Response: *The magnetic field intensities increase linearly as a direct function of current.*

MC 4-8.16

Comment: The OCS, containing the 2 x 25 Kv lines is apparently suspended only about 18 ft. above the earth, which suggest that the source of the strung EM fields will be only about 12 ft. above the head of the average person, if standing on the rail tracks. And perhaps closer for those standing on the station platform. What will the electric and magnetic fields increase to if a number of burdened electric engines (i.e., locomotives) are operating at the same time (and thereby significantly increasing the electrical load, and consequently the current draw), on a particular segment of the rail line? As an example, assume that a North (N)-bound passenger train and a South (S)-bound passenger train (both with lights and heaters energized) are simultaneously departing a particular station, and four other burdened electric engines are also operating in the vicinity (e.g., within 4 miles of the same station). How will this situation affect the E and H exposures of passengers on the station platform? And those within the rail car? Of the train crew operating the rolling equipment? Of

outdoor maintenance workers in the ROW?

Response: *The example cited above would produce a maximum EMF intensity level for a short-term duration. Although maximum measured readings for all of the exposed persons identified above are reported in the DEIS/R, (Volume III, Sections 5.5.2, 5.5.3, 5.5.4, 5.5.5, and 5.5.6), the evaluation of human health implications presented in the DEIS/R is based on long-term integrated average (time-weighted average) exposures rather than short-term maximum exposures. For an evaluation of human health implications from maximum exposures please refer to a separate FEIS study titled Occupational Exposures. This study addresses the EMF exposures received by railway workers, electricians, and other workers potentially exposed to high EMF levels.*

MC 4-8.17

Comment: (Sect. 3.5) EM Fields and Interference. Re: the statement, "The EM fields that would be generated would have frequencies... typically between 3 and 3000 Hz ... known as extremely-low-frequency (ELF) EM fields". I believe that the existing electrical engineering data has demonstrated the generation of EM fields, and radio influence (RI), and radio frequency interference (RFI), Kv, and 2 x 25 Kv power 3000 Hz (3 KHz), and lower than 3 Hz from 115 Kv, circuits.

Response: *The DEIS/R summarizes the study of electromagnetic interference including radio interference in Volume I (Section 4.5.4). The DEIS/R Volume III provides the background information on this issue. Section 5.3.4 of Volume III discusses the federal regulations relevant to interference with communications transmissions from electric rail traction systems and associated components. Section 5.5.8 of Volume III addresses radio interference from high-speed electrified rail systems. Both the FCC and the Coast Guard responded that they had no knowledge of interference with any communications system from the existing Amtrak electrified lines from New*

York City to New Haven.

MC 4-8.18

Comment: It is the ELF region of the EM spectrum which has been cited in scientific literature most often in the past 10 (or so) years as possibly being implicated in serious adverse biological consequences, even with certain short, low level continuous exposures, but especially with continuous exposures. [The commenter lists 7 reference items].

Response: *The scientific literature related to biological effects of exposure to the ELF region of the spectrum is discussed in the DEIS/R Volume III (Section 5.2). This section, which summarizes the review of the epidemiologic and laboratory research in this literature, addresses the scientific research and specific citations which is the subject of the commenter's list.*

Some epidemiologic studies relevant to ELF exposure have been published after the DEIS/R was written, and in response to comments, two additional Technical Studies have been prepared for inclusion in the FEIS/R. The studies are titled Analysis of EMF Impacts on Children and Documentation of EMF Occupational Studies which augment and update the DEIS/R.

It is noted that one of the commenter's seven references includes a 1992 Status Report prepared for the state of Maryland. An update of this Status Report, dated 1994, contains the following statement:

"The studies covered in this Status Report (taken singly or together) still do not provide evidence of an association between EMF and health outcomes that is more conclusive than presented in previous Reports." [Conclusion, page X-1]

MC 4-8.19

Comment: (Vol.III, Appendix B) I recognize most of the excellent databases cited, and have used many of them in my work. Notable, because of its absence, however, is

reference to, or even mention of any of the databases pertaining to the biological effects of EM fields. Some examples include: TOXLINE, MEDLINE, CANCERLINE, and others. A number of excellent recent bibliographies on the subject also exist. An older bibliography of the world literature on the subject of radio frequency (RF) electrobiology, which is frequently cited, is the one I published in about 1970, and updated about annually with 9 supplements. Approximately 6000 references on the subject are contained in the bibliography, supplements, and addenda. I no longer felt the need to maintain the bibliography (nor had the time to do so) once the bioeffects databases came on line. For completeness, I cite the 9th Supplement, and the Compendium to the bibliography."

Response: *Appendix B in Volume III of the DEIS/R refers to references cited for Technical Study 5, which addresses the topic of biological effects of EMF. No mention is made of computerized databases and bibliographies of the world literature because it is standard and accepted scientific procedure to cite in the bibliography only those references specifically discussed.*

The computerized databases cited by the commenter (e.g. MEDLINE) have been among those used by the scientists who prepared the summary. The two specific bibliographies cited by the commenter are not the most current references (1979 and 1984), and do not include the scientific literature on fields in the power frequency range (60 Hz), which are relevant to this project. Instead, the cited references are restricted to discussion on the radio and microwave frequency ranges.

MC 4-8.20

Comment: (Sect. 3.5) EM Fields and Interference. Re: the statement, "Population beyond 150 feet of the EMF source are not considered to be affected since no incremental EMF exposure is expected beyond this distance -" (Underline has been added by me for emphasis). Has this

statement been verified by the writers of the draft EIS, from measurements on the already-electrified portions of the rail system?

Response: *Yes, the exposure assessment is based upon field measurements of existing electrified tracks and power supply systems (including measurements on the NEC and the TGV train system in France). This is summarized in the DEIS/R Volume I (Section 3.5.1.1). Volume III of the DEIS/R (Sections 5.5.1 through 5.5.3) which explains the methods for estimating EMF exposures from the 115 kV tie-line, the Amtrak's X-2000 train demonstration, existing catenaries and wayside locations along the existing electrified portion of the NEC.*

Furthermore, the DEIS/R does not intend to imply that EMF does not propagate more than 150 feet. The fact is that low strength EMFs may propagate beyond 150 feet. However, the strength of the field from electrified lines of the configuration proposed for the NEC is inversely proportional to the square of the distance away from the line. This results in a field strength which decreases rapidly with distance, but theoretically never reaches zero. However, beyond 150 feet the strength associated with electrical lines becomes very low (less than 4 mG) and frequently indistinguishable from other EMF "background" sources (other power lines, homes, vehicles, lighting, etc.). This is especially true in the more urban areas. While exposure assessments beyond 150 feet could be developed on a theoretical basis, the significance of the information would be questionable since it would become increasingly harder to correlate the local field strength with a specific electrical source.

MC 4-8.21

Comment: I have made such E and H field measurements near various TLs and other lines (operating at a frequency of 60 Hz, with voltages between 1 and 230 Kv, with various electrical loads, and suspended above the earth at various heights), and

have clearly been able often to quantitate E and H fields at distances greater than 150 ft. from the line. Others have also done so, and published reports of their findings are available.

Response: *Since E (electric) fields are directly related to the voltage, and H (magnetic) fields to the current load, fields must be estimated for the specific design and load characteristics of the EMF source in question. In addition, the configuration of the power lines and current loading affects the pattern and extent of E and H fields from a particular source. For these reasons, measurements of fields emitted from unrelated or unknown types of transmission lines are not necessarily relevant to this electrification project. A related discussion can be found in Section 5.5.3 of the DEIS/R, Volume III.*

MC 4-8.22

Comment: In addition, I note that no consideration and mention of the E and H fields associated with (and generated by) the 115 Kv TLs, from the utility (power) companies to the rail substations, has been noted in the draft EIS.

Response: *Volume III of the DEIS/R (Section 5.5.1) describes the E and H fields associated with the utility 115 kV tie-lines and the methods used to obtain these estimates.*

MC 4-8.23

Comment: (Sect. 3.5) EM Fields and Interference. Re: the statement (on page 3 -11), "... that the train passenger (voluntary exposure) has alternatives..." I believe it is in error to consider that the rail passenger receives voluntary exposure to the EM fields. Likewise, in the same paragraph, the statement "... workers (e.g. electrical line workers) who would normally be exposed to EMFs and protected under specific occupational safety regulations" (underline is mine). I'm not certain which "specific occupational safety regulations" are being referred to, although I suspect the author is referring to the old OSHA standard (1910.97) for RF EM fields. Please be advised that OSHA has suspended (about 8 years ago) enforcement of that part of

the standard, in the face of criticism, and the revisions/modifications and guidelines being developed by ANSI (C95. 4), the ACGIH (TLV for EM fields), and other groups. As of this date, OSHA is not presently enforcing a standard (according to personal communications with the Director of the SLC, UT, Health Response Team/ Field Office). Since I have served for many years on the ANSI and ACGIH (and other groups) committees involved with the development of standards/ guidelines for human exposure to EM fields, I am well aware of the considerable discussion, criticism, and efforts at (and difficulty with) revising the EM exposure "standards". I believe it is misleading to imply that worker "protection" is presently assured. In the previous paragraph of the EIS document, a effort is made to distinguish between short -term and long-term exposure of personnel to the generated EM fields. I believe that certain occupational exposures (such as are received by some members of the train operating crew, as Table 4.5 -2 indicates, up to 134 mG of H field exposure in the locomotive), and some passenger exposures (such as regular, long distance commuters, as Table 4.5 -2 indicates, up to 37 mG H field exposure of passengers on the train, and up to 209 mG H field exposure in the station/on the platform) would qualify as long -term exposure.

Response: *Worker health is addressed by several exposure guidelines prepared by technical and scientific organizations. It is agreed that OSHA is not presently enforcing a standard for power-frequency EMF (60 Hz). It is noted that the "old OSHA standard" mentioned by the commenter is for RF (radio frequency fields), which are different from the fields associated with this electrification project.*

As discussed in Volume III of the DEIS/R (Section 5.3.3.1), the ACGIH guidelines are designed to "...represent conditions under which it is believed that nearly all workers may be exposed day after day without adverse health effects." Exposure

guidelines developed by other organizations are also shown in that section of Volume III, Table 5-2. As Table 4.5-2 (Volume I) indicates, the occupational exposures summarized by the commenter are many fold below the lowest of the occupational exposure limits, and are also well below exposure limits proposed for the general population.

MC 4-8.24

Comment: (Sect. 3.5.1.2) On page 3-12, a discussion is presented of some background and common EM exposure sources. While it is correct that certain electric devices (such as hair dryers) will produce strong EM fields, their intensity drops off rapidly with distance from the source (contrary to the fields from an extended source such as a power line, or the OCS). Also, the exposure to EM fields from a hair dryer are generally only for short duration, and occur only to a small (limited) portion of the body.

Response: *The comment is correct and noted. Because electric devices (from hair dryers to transformers) typically have complex wiring configurations, which can cause the cancellation of magnetic fields, and because these devices approximate a point source, magnetic fields will tend to drop off extremely rapidly (typically as a function of one over the distance(d) cubed ($1/d^3$)). By comparison, the magnetic field from the proposed NEC electrification is projected to drop off as a function of one over the distance (d) squared ($1/d^2$).*

Two categories of background EMF information are presented in Section 3.5.1.2. The first category presents EMF levels associated with being next to specific sources which people would be familiar with, thus providing DEIS/R readers with a perspective upon which to compare EMF intensities discussed in later text. The second category provides typical background EMF levels associated with two outdoor settings (urban and rural). EMFs in these outdoor settings would result from a variety of local sources including lights,

transformers, electrical distribution lines, home wiring, manufacturing facilities, pumps, and motors.

The urban background magnetic field levels associated with the power frequency (60 Hz) were obtained for the DEIS/R by driving through the City of Providence, while rural background magnetic field levels were collected in two undeveloped areas in Connecticut.

MC 4-8.25

Comment: incidentally, Table 4.5-1 is somewhat out of date, and contains a number of inaccuracies.

Response: *The references supporting this table may be out of date because updates from the International Radiation Protection Association (IRPA) and ACGIH have appeared after the DEIS/R was prepared. However, these updates do not change the exposure limits listed in the table. Therefore, no inaccuracies in this DEIS/R table are known to exist as of July 1994.*

MC 4-8.26

Comment: (Sect. 4.5.3) EMF Impacts. The opening statement, "Since there is no established link between EMF exposure and public health effects,... "Unfortunately, the writer has not considered the weight of evidence contained in the scientific literature. Perhaps some of the literature I cited earlier will enable the writer(s) to become a bit more versed with some of the ELF bioelectromagnetic health and safety issues.

Response: *The statement quoted is based on the weight of evidence evaluation summarized in Volume III of the DEIS/R (Section 5.2). In response to other comments regarding recent health studies, two additional studies (Analysis of EMF Impacts on Children and Documentation of EMF Occupational Studies) have been prepared for the FEIS/R. These technical studies address recent scientific literature and one, the Analysis of EMF Impacts on Children, summarizes recent reviews of the scientific literature by other groups of scientists.*

MC 4-8.27

Comment: (Sect. III/ 5.3.3.1) The Physical Agents Threshold limit Value (TLV) Committee of the American Conference of Governmental Industrial Hygienists (ACGIH), [please note the correction in the name of the organization], on which I have served since about 1979, has had under consideration (for a number of years), a statement relating to the possibility of carcinogenicity associated with EM fields. The TLV book notes that the issue is presently under consideration.

Response: *While the information provided about the ACGIH is noted, there is no reference to carcinogenicity in the 1993-1994 TLV book published by ACGIH. It would appear that the commenter is referring to the discussion of studies that the TLV Committee reviewed.*

In its assessment of the epidemiology studies, it is noted that the committee concluded: "Overall, the epidemiological studies on the possible correlation between cancer risk and residential exposure to electromagnetic fields do not support the conclusion of a strong association." Furthermore, in its assessment of studies on genetic damage it stated: "At the present time, there is convincing evidence that power frequency fields do not produce cytogenetic alterations and are not directly mutagenic."

MC 4-8.28

Comment: (Sect. III/ 5.3.3.2) The Center for Devices and Radiological Health (CDRH), (from which I retired in 1992), of the FDA, realizes that magnetic resonance imaging (MRI) devices are operated only by trained and licensed "practitioners of the healing arts", and that the risk of the intense EM exposures received by the patient usually are accompanied by (and compensated by) significant benefit to the patient.

Response: *The comment is noted.*

Alan R. Cripe

MC 4-9.1

Comment: The repeated statements that only "extension of electric traction" (utilizing fixed electrification) can reduce trip times to less than three hours is patently false and misleading.

Response: *Trains utilizing electric traction are the only high-speed technologies presently in use and being manufactured that can achieve the three hour trip time on a consistent basis taking into account the increasing congestion on the NEC. FRA believes the potential exists that new non-electric trains can be developed that can achieve performance levels equivalent to the best electric locomotives and, for that reason, has proposed a high-speed non-electric locomotive development program. This program is discussed in the context of the No-Build Alternative -- FRA 150 scenario.*

MC 4-9.2

Comment: The DEIS/R statement that "turbotrain operations were introduced in the Empire Corridor" is totally false and misleading. In fact the 1967 UAC TURBO I's would fully meet the performance criteria of less than 3 hour trip times today.

Response: *The United Aircraft TurboTrain I is described in Volume I, Section 2.4.1(b) of the FEIS/R.*

MC 4-9.3

Comment: Even the German ICE train (with 2 locomotives + 9 cars - 12,868 HP) gives a very high 23 HP/ton but still not as much as the TURBO I of 1967. So it cannot be concluded that "the principal operational benefits of electrification included superior acceleration and deceleration capabilities, higher achievable operating speeds." (DEIS/R Volume I, Page 2-3, para. 4).

Response: *In theory, acceleration and peak speeds are power-source neutral, that is the capabilities of a particular locomotive are determined by how much power it has at its drive wheels and how much resistance that power must overcome. High-speeds system development over the*

last 15 years has focused exclusively on the use of electric traction. As a consequence for high-speed trains presently in use or being manufactured, electric traction offers superior performance when compared to non-electric locomotives.

MC 4-9.4

Comment: If the DEIS/R is to be believable then Volume III (technical) will have to provide sufficient technical data to allow comparisons between electrified trains operating from a catenary as proposed, and self propelled turbo or diesel trainsets operating on the existing infrastructure. This should include train simulations with outputs of trip time, energy consumption, peak power consumption, energy costs, etc.

Response: *See Response 3.2 in this volume.*

MC 4-9.5

Comment: The summary of this section in the DEIS/R carefully overlooks the need to address "economic requirements" on page 2-1 para. 2. Clearly the impact of over a billion dollars of unnecessary expenditures has an adverse impact on every taxpayer.

Response: *The purpose of the NEPA process is to address the environmental impacts of a proposed action and its reasonable alternatives. Economic costs of implementing specific alternatives, except to the extent that they might make the environmentally preferable alternative impractical or infeasible, are normally considered by agencies elsewhere in the decision making process.*

George Haikalis

MC 4-10.1

Comment: I am writing to you on behalf of Al Papp and myself to request that you extend the comment period on the DEIS on the New Haven - Boston Electrification Project by 60 days.

Response: *In response to this and similar requests, the MEPA and NEPA comment periods were extended by six and seven weeks, respectively, to January 21, 1994.*

Albert L. Papp, Jr.

MC 4-11.1

Comment: High Speed Ground Transportation Act of 1965 (HSGTA) is referenced and claims that "Metroliner equipment was successfully deployed along the New York City Washington route and the turbotrain operations were introduced in the Empire Corridor between New York City and Albany." This statement is incorrect with regard to both the Metroliner and the turbotrain.

Response: *These errors have been corrected in the FEIS/R.*

Belknap Freeman

MC 4-12.1

Comment: In the tabulations, Tables 3.3.1, 3.3.2, and 3.3.3 (pages B-8 through B-10) "Status of Historic Resources in the Project Area," to include structures that appear in some instances to be private property, then to recommend or indicate that they are eligible to be designated to be "Historic Properties," would seem to be stirring up actions that can constitute "taking of property rights" without the consent or interests of owners. If there had not been activity in this area previously would appear to free the project from any burden or concern for "after the fact designations."

Response: *Section 106 of the National Historic Preservation Act of 1966, as amended, requires federally funded or licensed undertakings to take into account their effects on properties listed on or eligible for the National Register of Historic Places. Therefore, the project developed recommendations, for review by the State Historic Preservation Officer, as to which properties meet the criteria for listing in the National Register. Such a recommendation does not imply that nomination to the National Register will take place; in fact, in the case of private property, while it may be considered eligible, it cannot actually be listed in the National Register without the owner's consent.*

MC 4-12.2

Comment: There are details of issues in the

Environmental Impact Statement/Report, which if added, could make stronger arguments for "doing the project." For example, in making the locomotive change at New Haven, with individuals, many with baggage, in getting off or getting on train at the New Haven Station are confronted with the lights in the train going out (as power for train lighting, other than emergency lights) goes out during locomotive change procedure.

Response: *Comment noted.*

MC 4-12.3

Comment: In discussion of alternatives for example, there was an analysis of third rail operation as an alternative. Comments were made concerning the need for many substations along the route and the hazard for the public. It would be a stronger issue if one were to include the results of elaborate tests performed by the Long Island Railroad to satisfy that issue, wherein it was determined that at higher speeds one could not obtain adequate energy, excessive arcs and burn off of contact shoes, alignment problems, et.al.

Response: *Comment noted.*

MC 4-12.4

Comment: In Volume III, page 4-56, the text reads: "...future electric Commuter service uncertain..." Yet as the advantage of including commuter service within the scope of the project is obvious, it would seem advantageous for the Environmental Impact Statement to provide a bit of background as to the underlying problem which is hidden from normal view, involving funding and jurisdiction.

Response: *The MBTA has long term plans to convert to electric traction with resulting benefits on train performance, energy consumption and air pollutant emissions. However, the date of such a conversion is unknown for a number of reasons including the ones cited in the comment. The FEIS/R recognizes, however, that an indirect benefit of the Proposed Action is facilitating the eventual conversion of commuter service.*

MC 4-12.5

Comment: As the EIS product features many advantages of electric over diesel electric locomotives; the obvious question arises, why not provide the capacity and such requirements as "layover facilities: for the use of electric locomotives in lieu of diesel locomotives on commuter trains?

Response: *The system as being designed includes capacity for future electrification of the commuter trains. As the commuter agencies determine their needs, additional facilities will be added to the total system.*

MC 4-12.6

Comment: Lowering of Tracks-Drainage: What is missing in the environmental report appears to be lack of any mention of what happens to surface water in these situations. (The run off of surface water to prevent it collecting in the ballast; the run off water onto adjacent properties, or collection of water from what would become higher properties, and the impact of undercutting on any existing drainage ditches along the right of way?)

Response: *In the DEIS, Volume I, page 4-53, there was a discussion of lowering tracks in the Project MUD area, a location of some concern to the MBTA.*

Amtrak plans to remove ballast to increase clearance at bridges wherever feasible. If undercutting the track will interfere with the existing drainage system, bridges will be raised. This is the case at nine bridge sites including two in Connecticut, five in Rhode Island and two in Massachusetts.

MC 4-12.7

Comment: Illegal Crossing: The one option now is to "do something" and make record of same, at each and every "illegal" crossing so identified as to block passage and establish control. If nothing else, to break any period of use that could be conceivable by a claim of right of passage on the basis of "adverse possession."

Response: *Volume I, Section 5.1 discusses fencing as a mitigative measure for illegal access to*

the tracks that may have an impact on pedestrian safety. The actual requirements for fencing will be addressed in the record of decision.

MC 4-12.8

Comment: On page 2-7 of Volume I, the statement is made to effect: "...The 2 x 2.5 KV - 60 Hz supply system is viewed as superior to the other systems because it is considered the standard for catenary systems worldwide..." Such a specific statement in the EIS is false. It fails to take into consideration the use of 16 2/3 Hertz in such countries as Germany, Austria, Switzerland, Sweden, Norway and Costa Rica (at 20 Hertz).

Response: *2x25 is not a world standard and the FEIS/R has been corrected to reflect this error. However, the 25 Kv (contact wire to rail) electrification systems have become the de facto standard for new systems. Site specific reasons may dictate other voltages (e.g., long distances with adequate clearances and few utility feeds may favor 50 Kv, as was the case with Tumbler Ridge and South Africa; additions to existing electrification systems may dictate that older, pre-established voltages be retained to accommodate existing locomotives). None of these special cases exist on the NEC. The existing and planned Amtrak trainsets are capable of operating on both 12.5 Kv and 25 Kv. The use of an autotransformer system (2x25 Kv) will reduce the number of substations needed and EMF generation.*

The choice of frequency is a favorite topic of debate. The commercial frequencies are 50 Hz in Europe and 60 Hz in North America. The older electrification systems chose to use lower frequencies (e.g. 16 2/3 Hz in Sweden, Germany; 25 Hz in the U.S.) to overcome some of the technical difficulties that existed at that time. The locomotives had poor power factors, the utility systems were relatively weak and locations for utility connections were usually sparse. Lower frequencies provided some compensation by lowering the inductance of the catenary system. A similar phenomenon took place in the

utility industry. At one point, 25 Hz was a standard frequency on the east coast of the U.S. The utilities have now standardized on 60 Hz (50 Hz in Europe) for commercial power. Railroad electrification at commercial frequencies gains substantial savings in eliminating frequency conversion equipment, wayside transmission and distribution lines and the associated operating and maintenance costs; and by using equipment that has been developed and proven in the utility industry. The downside of using commercial frequencies is that the distance between substations can be lengthened by going to lower frequencies. A similar savings, however, can be gained by going to higher voltages for distributing the power (i.e. 2x25 kV). The influence of frequency has been substantially mitigated by the introduction of new generation locomotives with near unity power factor and largely harmonic free operation.

The debate of appropriate frequency rages on. It is interesting to note that the new systems for the TGV (SNCF), British Rail, Channel Tunnel have all gone to commercial frequencies. The only users that appear to use the lower frequencies are those users that historically were tied to lower frequencies and are perpetuating the use.

MC 4-12.9

Comment: Page 1-2 of Vol I in its attempt to describe the arrangement proposed for the catenary configuration is incorrect, and in conflict with subsequent material presented in the Environmental Impact Statement. The material as outlined on page 1-2 describes an earlier two wire scheme of a catenary wire and ground return wire. This arrangement developed to be unable to support the Amtrak requirement, which later became a three wire arrangement employing a "feeder, ground wire, and catenary, interconnected with use of auto transformers."

Response: This error has been corrected in the FEIS/R.

MC 4-12.10

Comment: As a serious technical error as presented, the Vol. III text, page 5-17, makes the statement that magnetic fields are not attenuated. To make such an isolated statement would serve to generate unnecessary concern. The statement on page 5-17 of Vol. III is also in conflict with page 3-10 of Vol. I where it states EMI density decreases with increased distance from the source.

Response: In Section 5.4.3 of the DEIS/R (Volume III, p. 5-17), it is not the intention of the DEIS/R to infer that magnetic fields are not attenuated or do not dissipate. The goal of the text is to indicate that while magnetic field are not readily attenuated by objects and living tissue, electric fields are readily attenuated these materials. While some materials, especially magnetic ones, attenuate magnetic fields, the main contributor to decreased magnetic field strength in a study such as this is the distance from the emitting source (See response to CT 3-38.49). Because of these physical differences in the nature of the electromagnetic field components, it is only the magnetic field component that is of concern regarding potential health effects.

MC 4-12.11

Comment: The EIS, in its Vol. III, page 5-37, in speaking of shielding, mentions "ferrous materials" being the only shielding material. Again the EIS is being too harsh and is supportive of "alarm." The EIS fails to recognize that any conducting material will in effect collapse magnetic fields, when the magnetic field "cuts" (at right angles or equivalent) and there is a path for current loop or surface eddy current. We must recognize that we are concerned with the realm of a continually changing magnetic field (not a fixed field such as earth's field which is relatively constant). Maybe the authors are not aware of the use of copper and aluminum as shields on many aerial type cables, where ferrous materials are undesirable due to say rust or lack of current carrying capability.

Response: *The DEIS/R, Vol.III, page 5-37, states that shielding is accomplished by the use of metal components and that various materials, besides "ferrous materials," can be used to shield EMFs. The paragraph also acknowledges that steel plate and other materials may be used and notes that shielding may be impractical, expensive, and difficult. The commenter's elaboration is appreciated.*

MC 4-12.12

Comment: The EIS report speaks of passengers on trains being exposed to EMI. The Vol. III report indicates that measurements within cars of EMI were obtained, being adjusted for difference in catenary voltage and current, between that on METRO North, with values obtained being adjusted for that obtained with that to be anticipated on the proposed north end project. No mention is made as to what track the values were taken when on METRO North. Amtrak generally operates on middle tracks, such that catenary is farthest away from the "feeders" (whose flux is opposite to that of the catenary - a train on the outside tracks would be closer to feeder, thus have greater cancellation of catenary flux). As to mention of measurements in the cars, no mention is made as to what was done to identify any EMI contribution from interior lighting, etc. vs. external sources?

Response: *Data regarding which track the train was on was not simultaneously recorded along with the on-train EMF measurements. However, it was noted by field technicians that the train on which EMF measurements were taken did use various tracks during the testing. In addition, field measurements were taken at several points along the wayside and at station platforms. The information collected, therefore, provides magnetic field strengths from the inner areas of the track/catenary system and from 15 feet to 60 feet away from track/catenary system (See Volume III, Section 5.5). It should be noted that the majority of EMF cancellation effects will be a function of the circuit design and the location of the*

catenary and feeder lines, rather than someone's location amid the electrified lines.

During on-train EMF measurements in the coaches, an effort was made to avoid background EMF sources, such as interior lighting. However, total isolation from background sources is not possible. While measurements were being collected, the locomotive would travel under various stages of acceleration, coasting, and breaking. During periods of coasting, when no power is being drawn by the locomotive, EMF readings will represent background levels in that specific area of the train and at that specific location along the tracks. During on-train field testing, EMF levels continually fluctuated, as expected, but frequently fell below 2 mG. It therefore could be concluded that background levels in some locations of the coach are less than 2 mG. However, it is important to realize that exposure to a specific on-train, non-locomotive EMF source could be significantly greater than 2 mG. For instance, common fluorescent lighting can create a magnetic field on-the-order-of 20 mG, 12 inches from the source.

MC 4-12.13

Comment: The EIS report invents its own terms, and establishes possible confusion in its violation of the English Language. On page 5-20 of Vol. III, the statement is made, to effect: "...a specific catenary is energized when a train passes through it, and is not energized at other times..."

Response: *The use of the term energized refers to periods when the power for a specific section of the catenary system is on. It was used because it is easier to understand by a non-technical audience. As directed by NEPA, the EIS was written in non-technical language whenever possible.*

MC 4-12.14

Comment: All these items having an impact on the questionable need to add all oil or gas generation to accommodate Amtrak. Maximum peak periods are one thing; but normal load is another. The utility would

not add additional oil fired generation dedicated continuously to Amtrak; but would, other than peak load periods, spread the load over various fuels, to include a major portion of nuclear energy as well as hydro electric, neither being a problem under the Clear Air Act.

Response: *Volume I, Section 4.6 of the FEIS/R provides a revised discussion of the types of fuels used for power generation.*

MC 4-12.15

Comment: What appears to be missing from the socioeconomic tabulation is the additional maintenance force for the added support of Catenary and Substations and associated control systems. Permanent man power would also be required for "Power Directors" to work as interface with utilities, control switching, respond to trouble reports and provide clearances for employees working on catenary or sub stations; also liaison with train dispatchers (as to what tracks are available to them). As will be covered under the caption of personal safety, there should at minimum be two full time employees to travel to schools and public meetings to continuously instruct the public not to climb freight cars, not to climb out on bridges, etc.

Response: *Amtrak recognizes the need to properly staff the new electrification system. Additional positions will be created and trained to provide the manpower needed to operate and maintain this system. The actual numbers needed will be determined closer to completion of the system's construction.*

Amtrak currently employs a police officer in its Boston Division (New Haven to Boston) who works on a full-time basis in schools, children's museums and other institutions to educate children about the dangers of playing near a rail line. The police officer yearly meets with tens of thousands of students. Amtrak is committed to this program and will expand it as required to promote education. In addition, Amtrak plans to work with local fire departments and rescue agencies located serving

communities near the rail line to provide education and advice on fire and rescue activities near an electrified, active rail line. Section 5.1.1(h) of Volume I of the FEIS/R also requires Amtrak to establish an enhance safety reduction program in communities adjacent to the NEC.

MC 4-12.16

Comment: On page 5-22 of Vol I, the EIS statement is rather cavalier when it appears to write off Conrail's interest in use of high dimension cars, or P & W's relations with Rhode Island for a port facility at Quonset Point. The stakes are high and the competition is keen.

Response: *Amtrak will ensure that the design for the NECIP is coordinated with the State of Rhode Island and Providence & Western Railroad in regard to the Davisville/Quonset Point Project. Amtrak will be directed to ensure that wherever possible, it coordinates its design and construction action to accommodate any plans for development as part of the Davisville/Quonset Point project. There are no present plans for a clearance program on that part of the NEC over which Conrail operates.*

MC 4-12.17

Comment: In the section on Energy Impacts, page 4-24 and 4-28 of Vol I, (and elsewhere) reference is made to contemplated use of 18 car trains for Amtrak's "Express Trains" -- has anyone thought this out in depth?? -- new problems - remember earlier individuals in making so-called improvements to South Station who removed several car lengths from each track on the North End of the Station as well as the current design effort to add a third ladder to accommodate Old Colony trains over to 7 track??? Doubt that the train directors at Penn Station would appreciate 18 car trains as a routine habit, since there are only a few spots they will fit, and now we have the addition of the "Empire Service" shifted from Grand Central station plus added NJT trains along with more expected from the Karney connection, etc.? Then there is the interesting problem of passenger control - assigned cars or dual stops at

intermediate shorter stations? (Increased burden on "hotel power" - an AEM-7 can't handle it = double head locomotives?? Bring back the E-60's???)

Response: *The train lengths discussed were used by Amtrak in sizing the electrical facilities required as part of the Proposed Action. They were used to identify the maximum power required with a substantial margin of safety. The EIS/R uses these train sizes in a similar way, to provide conservative estimates of impacts of the Proposed Action. The FEIS/R recognizes that most likely the express trains will consist of one locomotive and six cars and the conventional train will consist of one locomotive and eight cars and that it is extremely unlikely that trains of the larger size will operate on this portion of the NEC. (See Volume I, Section 4.6.2(a) of the FEIS/R.)*

MC 4-12.18

Comment: The point in all this - there should be a high priority with or without electrification, to eliminate rail highway crossings.

Response: *Comment noted.*

MC 4-12.19

Comment: As mentioned previously, in discussion of employee additions any major electrification should anticipate a need for at least two full time individuals to provide safety information talks at schools and community affairs, as well as monitor signs and barriers; thus contributing to the safety of the community.

Response: *See response to MA 4-12.15.*

MC 4-12.20

Comment: The first issue, it is mentioned in Vol I that noise measurements were taken south of New Haven - if taken literally, this would imply somewhere on METRO North. This is not accurate, as METRO North does not have the configuration of concrete ties with shock absorbing pads employed on the NEC. South of New Haven, on METRO North, with its curves and other considerations, one does not

find 120 miles per hour operation either.

Response: *Train noise measurements were made at three sites along the Northeast Corridor south of New Haven (i.e. outside the project area) for the purpose of obtaining source data for the train noise prediction model. Only one of these sites, located in West Haven, Connecticut, includes Metro North Service. The other two sites are in New Jersey, one in Iselin and one in Plainsboro. At the Plainsboro site, Amtrak Metroliner train speeds are typically 125 mph, and the measurements included X2000 and ICE operations at speeds up to 135 mph. Although the high speed tracks at the New Jersey sites include concrete ties, the type of track configuration is generally not a significant factor affecting the wayside noise levels.*

MC 4-12.21

Comment: On page 4-47 of Vol III, the report states noise measurements were taken at sites C-2 at Islin, NJ, and site C-3 at Plainsboro, NJ. At both sites, the railroad is a four track configuration, and Amtrak trains operate on any one of the four tracks, yet only tracks 2 & 3 (in the middle) are arranged with concrete; The text does not support if all measurements were taken on concrete ties equipped with shock absorbing pads beneath the rails.

Response: *At sites C-2 and C-3, noise measurements were made for Amtrak trains operating on all four tracks. However, all of the high-speed operations (above 85 mph) were on the two center tracks which include concrete ties, unlike the outer tracks which include wood ties. In any case, the type of ballasted track support is generally not a significant factor affecting wayside noise levels.*

MC 4-12.22

Comment: As a repeat, if Amtrak were to envision 52 trains a day on a two track railroad, intermingled with slow accelerating and operating diesel commuter trains, with their long dwell time at local stations; even with long high speed crossovers in combination with tracks signalled in both directions, one is going to find opposing

traffic to contend with thus limiting the "run around" possibilities. The Vol III, page 9-28, speaks of an increase of 218 commuter trains by 2010 -- on the same two tracks, with diesel locomotives?

Response: *Amtrak is adjusting train schedules of both Amtrak and commuter trains, upgrading sidings to increase operating flexibility, and have installed reverse running signaling all to mitigate the effect on all train operations. The issue of the proposed project's impact on freight rail service and the appropriate mitigation of this impact is discussed in Volume I, Section 5.2 of the FEIS/R.*

George A. Avery/General Edmund R. Walker

MC 4-13.1

Comment: The DEIS is not adequate and acceptable unless it gives more careful consideration to this [non-coastal] alternative route.

Response: *See Response 3.1 in this volume.*

MC 4-13.2

Comment: The DEIS is deficient in its failure to consider delaying the electrification project until a better assessment can be made of the alternative advanced technologies mentioned in Section 2.2.2. The required investment in electrification might be ill-advised if it proves an impediment to adopting the highly promising alternative technologies within a reasonable time.

Response: *See Response 3.2 in this volume.*

MC 4-13.3

Comment: The DEIS should be revised in its final form to reflect the existence of the above-referenced home I am building on Island Road in Stonington, CT. That site should be designated as site affected by noise and as a Visually Sensitive Receptor pursuant to factors discussed.

Response: *This site has been evaluated in Volume I, Section 4.11 of the FEIS/R for visual impacts and Section 4.4 for noise impacts.*

MC 4-13.4

Comment: Section 3.8.1.1 should mention that

Walker's Dock Crossing is used only seasonally and that the road leading to it is closed off by a locked gate between November and April. Section 3.8.1.1 is also inadequate in that it fails to provide any data indicating the relatively light use of Walker's Dock Crossing, relying for its failure to do so on the irrelevant fact that it is a private crossing. The DEIS is inadequate due to its failure to note that Walker's Dock Crossing is an important access for area residents who use Walker's Dock Marina for recreational access to Long Island Sound. Section 3.9.1.4 is questionable with respect to the appropriate train speed limit at Walker's Dock Crossing. Table 8-3, at p. 8-6 of Technical Study 8, indicates that at milepost 136.2, the speed limit is 50 mph. Table 3.9.7 at p. B-36 of the DEIS indicates a speed limit at Walker's Dock Crossing, just .4 miles along the track at 70 mph. This seems a substantial increase in speed in so short a distance. Sections 4.8.2.1 and 5.2.2.3 of the DEIS and Section 8.4.4.1 of Technical Study 8 are all seriously deficient in their failure to consider, as a mitigation measure for any increase in risk to vehicular safety, the use of improved gate protection at crossings such as Walker's Dock Crossing. Further, Section 4.8.2.1 of the DEIS and Section 8.4.4.1 of Technical Study 8 are both inaccurate in their description of the provisions of the 1992 Amtrak Authorization and Development Act (Public Law 102-533). That statute does direct "the elimination of all grade crossings on the Northeast Corridor east of New Haven." As more accurately noted in Sections 1.4.4.2 and 5.2.2.3 of the DEIS, that statute expressly provides for retaining crossings where a closing would be impracticable or unnecessary and retention of the crossing is consistent with US DOT safety standards. Section 4.8.2.1 of the DEIS and Section 8.4.4.1 of Technical Study 8 should be corrected to avoid misunderstanding and is application of the referenced statute in connection with evaluation of the recommendations of the DEIS.

Response: *This study does not recommend the closing of any at-grade crossings. The*

analysis of trip times and safety issues was completed using the existing crossings as an assumption. Neither travel times nor safety are significantly impacted by the maintenance of these crossings. Also see Response 3.8 in this volume.

Parent from Sacred Heart Parish

MC 4-14.1

Comment: We try to protect ourselves the best we can, but this Electromagnetic Field isn't necessary.

Response: *See Response 3.5 in this volume.*

Belknap Freeman

MC 4-15.1

Comment: In particular, in Attachment II, page 3, of my original comments to the EIS draft [see comments MC 4-12.1 through MC 4-12.24], under the caption "Petroleum" took exception to the EIS statement that "while generation of the proposed project would require greater petroleum use to power the intercity electric rail service under the proposed project than diesel service under the no build alternative". I offer additional material to support my objections to what was an unwarranted conclusion in the original EIS Draft. [See Volume IV Letter MC-4-15 for the additional supporting material].

Response: *The primary factor associated with the difference in petroleum use for rail operations in 2010 under the Proposed Action when compared to the No-Build Alternative 2010 base line is the increased number and higher speeds of trains. This difference however, is more than offset by diversion of passengers from less efficient modes.*

George Haikalis, Albert Papp

MC 4-16.1

Comment: Why were alternatives not fully addressed?

Response: *The development of alternatives considered in the FEIS/R is described in Chapter 2 of Volume I.*

MC 4-16.2

Comment: Why were propulsion alternatives

dismissed without analysis?

Response: *See Response 3.2 in this volume.*

MC 4-16.3

Comment: Why were other route alternatives not discussed?

Response: *See Response 3.1 in this volume.*

MC 4-16.4

Comment: Why were other performance goals not considered?

Response: *The goal of trip times of three hours or less between Boston and New York City with appropriate intermediate stops was established by Congress in the statute authorizing NECIP.*

MC 4-16.5

Comment: Who will ride the high speed trains?

Response: *See Response 3.9 in this volume.*

MC 4-16.6

Comment: What are the real energy and air quality gains of this project.

Response: *Projections of energy and air pollutant emissions under the different alternative scenarios are presented in Volume I, Sections 4.6 and 4.10 of the FEIS/R.*

MC 4-16.7

Comment: For this reason [lack of objectivity and quality of analysis] we suggest that the Volpe Center withdraw the current DEIS and issue a new DEIS that reflects the wisdom and knowledge available to Volpe. The new DEIS should be developed in an open way with adequate input from interested parties.

Response: *Comment noted.*

Alan R. Cripe

MC 4-17.1

Comment: The statements in Volume I of the DEIS/R on page 2-7, paragraph 3 - Gas turbine Locomotive with Third Rail Capability - as to failing screening criteria one and three are totally false and misleading. Furthermore, the DEIS/R "stacked the deck" against the LP Turbo

by deliberately under powering it, when any reasonable and credible study would have used two locos - still making it the least powerful train of those simulated.

Response: *The analysis in the DEIS/R was based on the gas turbine trainsets presently in operation on Amtrak's Empire Corridor. The FEIS/R expands its discussion of the No-Build Alternative to include a train representative of the fossil fuel locomotive that will be purchased by Amtrak as part of its ongoing high-speed equipment acquisition (FF-125) as well as a hypothetical product of FRA's proposed high-speed non-electric development program. Also see response 3.2.*

MC 4-17.2

Comment: Thus the only train representing proven American design and technology is purposely ignored. This is another indictment of this misleading and fatally flawed DEIS/R document.

Response: *See response to Comment MC 4-2.3.*

MC 4-17.3

Comment: If the DEIS/R is to be technically believable, the complete picture must be shown and the alternatives shown in detail. At the very least train performance simulations should be run for the original TURBO, TURBO II's, and III's, TURBO IIIa's, DMT 6D's, LRC 1-5-1's, LP Turbo with 2 locomotives, and any other candidate non-electrified trains.

Response: *See response to Comment MC 4-2.3.*

CT-Hearing 1.1

Patricia Zedalis

Connecticut Bureau of Public Transportation

Comment: Concerned about rail freight service, at-grade crossing elimination, and the coexistence of current and future commuter service on the Northeast Corridor.

Response: *The discussion of these concerns and appropriate mitigation has been expanded in the FEIS/R. Also see Responses 3.3 and 3.8 in this volume.*

CT-Hearing 2.1

Jim Repass

Northeast Corridor Initiative

Comment: This commenter supports the proposed action.

Response: *Comment acknowledged.*

CT-Hearing 3.1

George Haikalas

Comment: Mr. Haikalas' oral testimony was a general summary of written comments provided by him and Mr. Albert Papp which can be found at MC 4-2, MC 4-10 and MC 4-16. In addition, Messrs. Haikalas and Papp presented the paper that can be found in Volume IV entitled "Seven Myths about the Boston Electrification Project". This paper begins by stating its author's view that their position "challenges conventional wisdom" and that "This wisdom has been reinforced in recent years as foreign nations built new high speed dedicated passenger lines -- all of them electrified -- and has led to the almost universally accepted conclusion that much needed benefits and electrification are synonymous."

The paper is a series of arguments in favor of utilization of a gas turbine train based on the United Aircraft TurboTrain design instead of electrification of the Shore Line. These arguments are presented in terms of what the authors consider as seven "myths" about Amtrak's proposed project. These

"myths" are:

Myth #1 Only electrification will permit airline-competitive running times to Boston.

Myth #2 Electrification produces substantial environmental benefits and conserves natural resources.

Myth #3 The U.S. must look to overseas builders for high-speed train technology.

Myth #4 Electrically propelled trains are less costly to operate than gas turbine trains.

Myth #5 Only electrification can eliminate the time consuming engine change at New Haven.

Myth #6 Electric trains are more reliable, and less costly to build than gas turbine-powered trains.

Myth #7 Electrification increases rail system compatibility.

Response: *FRA agrees with the commenters' initial statement that most knowledgeable transportation professionals believe that electric traction currently is the best way to achieve the benefits of high-speed rail.*

The TurboTrain is described in Section 2.4.1(b) of Volume I of the FEIS/R. The use of an advanced non-electric train in lieu of the Proposed Action is addressed in the FEIS/R as the No-Build Alternative - FRA-150 scenario.

As stated elsewhere, the option proposed by the commenters is not necessarily a short-term one. There are no TurboTrains in operation or in production. The last TurboTrain was scrapped approximately 15 years ago. Its designers have stated that they have developed an improved design that provides better performance and eliminates the problems that Amtrak states the original TurboTrain had during its brief service with Amtrak. However, its designers also state that the advanced Turbo III cannot be developed without

Federal funding to complete its design, develop a prototype and conduct the necessary tests to demonstrate that it can achieve its designers' goals.

FRA does not have the discretion to use NECIP electrification funds for this purpose. As a consequence, an advanced TurboTrain design would have to be considered in the context of FRA's proposed high-speed non-electric locomotive development program. The Clinton Administration's High-Speed Rail Initiative includes a proposal to establish and fund a new high-speed rail technology development program. A major part of this program is FRA's proposal to facilitate development of a high-speed non-electric locomotive/trainset with a top speed of 150+ mph, and an acceleration capability equivalent to the best electric locomotives/trainsets, and which addresses the cost, reliability, and environmental issues associated with past non-electric locomotives.

A major issue in considering a product of this effort as an alternative to the Proposed Action is the uncertainty and delay involved. The first uncertainty is technical. FRA's goals are ambitious and often technology development programs fail to meet their goals. Therefore it is uncertain the extent to which FRA can facilitate development of a locomotive that can provide as good of service as the electric locomotives are capable of today.

Among the issues associated with the design of the Turbo III are whether it could be adapted to meet its customers' needs. In reviewing this design, Amtrak (which would purchase any trainsets used for intercity service between Boston and New York City) has expressed a number of concerns. The train is not configured in a manner consistent with Amtrak's view of the needs of the Boston to New York City market. Separate first class and food service cars would need to be added which might affect power requirements. In addition, only one car is handicapped accessible while the

regulations implementing the Americans with Disabilities Act require that all cars be accessible. Finally, the Turbo III design has a low center of gravity with a low platform height. The Northeast Corridor stations are designed with high platforms to reduce dwell time and accommodate handicapped passengers. Renfe Talgo, an established manufacturer of a high-speed train with a similar low platform design withdrew from consideration in Amtrak's high-speed trainset procurement, in part, because of the difficulties associated with converting its design for high-platform operation.

Compounding the technical uncertainty is the financial uncertainty. FRA does not presently have funds to undertake such a program. Such funds can only be made available by Congress. It is unclear whether or to what extent Congress will fund such a program to its conclusion. FRA requested \$10 million for fiscal year 1994 to initiate the non-electric locomotive program. Congress did not provide any funding. For fiscal year 1995, FRA requested \$6.5 million specifically for this program and \$9.5 million for related efforts. At this time there is no final action by Congress on this request. In their separate actions on the Department of Transportation and Related Agencies Appropriations Act for fiscal year 1995, the House of Representatives provided \$3 million and the Senate provided no funding for this program.

Finally, even if the funds are made available and the goals are achieved, there would be substantial delay in realizing the benefits of high-speed rail. There are several firms which have expressed an interest in participating in this development program if it proceeds. It is likely that the program would include several stages of evaluations before a prototype is actually funded and developed. FRA envisions that under its program, if fully funded, a prototype high-speed non-electric locomotive would not complete testing for seven to ten years.

The remainder of this response will address the specific points raised in this comment.

Myth #1: The first point asserted in this paper, is that gas turbine trains based on the TurboTrain design could also achieve the Boston to New York City trip time goal of three hours or less. In fact, the peak speed and acceleration capability of rail equipment is based upon available horsepower and the weight that needs to be moved, not the type of prime mover used to generate that power. Clearly there is the potential to develop high-speed non-electric trains that would have performance equivalent to present electric operations, at least in the speed range under discussion in this FEIS/R (150 mph). However, as the commenters point out, recent high-speed development has focused exclusively on electric prime mover-based high-speed rail. Presently, there is no non-electric high-speed locomotive or trainset that can equal the capabilities of existing high-speed electric equipment.

The electric technology exists and foreign versions have been demonstrated in the U.S. FRA has proposed a high-speed non-electric locomotive development program and the non-electric high-speed equipment envisioned by the commenters could be the product that results from that program.

The commenters argue in favor of a long-term effort to develop a separate new high-speed rail line connecting Boston and New York that could achieve even greater trip time reductions than that presently proposed by Amtrak and that the Turbo III should be used on the Shore Line in the interim. As stated above, this is not necessarily a short term option.

The development of a dedicated new rail line is outside the scope of this EIS, which is extension of electrification to the Shore Line from New Haven to Boston. However, extension of electric traction does not preclude possible future achievement of the commenter's goal of "true" high-speed rail on a new

dedicated right-of-way. The potential challenges associated with developing a new dedicated high-speed rail right-of-way are discussed in Sections 2.2.2 and 2.2.3 of Volume I of the FEIS/R. These all involve significant environmental impacts and delays. But the most daunting challenge is available funding. Any such route would require several billion dollars more than electrification. At the present time, FRA does not believe such levels of funding will be available for the foreseeable future, whether or not \$400 million is spent to implement the electrification project.

The commenters also state that it makes little sense to spend public funds to electrify a line where "true" high-speed operation cannot be sustained. The benefits of the Proposed Action are discussed in Chapter 4 of Volume I of the FEIS/R. Even if, at some future date, funding is found for a dedicated new high-speed rail right-of-way, the investment in electrification would not be lost. In addition to the benefits that would be derived in the interim in areas of fuel efficiency and air quality improvements, the Shore Line will continue to play an important transportation role. It will provide the improved transportation access to Providence, New London, and other cities along the Shore Line that would be bypassed by the commenters' proposed new high-speed rail line.

Myth 2: This comment implied that the substantial environmental benefits of electric operation are mythical. Indeed, it is the conclusion of this FEIS/R that there are substantial environmental benefits from extension of electric traction in the areas of energy efficiency, air pollutant emissions, particularly when the capabilities of modern electric high-speed trains are compared to the capabilities of non-electric high-speed trains in operation or production. These benefits are detailed in Chapter 4 of Volume I of this FEIS/R.

With regard to specific points, the commenters assert that a sizeable amount

of energy will be required to generate the power needed by the electric rail service. As detailed in Section 4.6 of Volume I of the FEIS/R, even using conservative assumptions of energy use of the electrified operation, the power demand would be well below one percent of the generating capacity of the local power pool and would translate into annual savings of petroleum consumption of more than 10 million gallons. In fact, the power requirements will likely be less than half the conservative estimates. And, notwithstanding the commenter's opinions that utilities are anxious to diminish their peak loads (and by implication do not support this project), the comments from utilities non this project have been favorable.

The commenters also opined that regenerative braking will not contribute to energy efficiency of the proposed system. While the energy analysis in this FEIS/R did not include any energy savings from regenerative braking, it did recognize that Amtrak is planning to incorporate such a system in the project's design and substantial energy savings could be possible. Systems recovering energy from regenerative braking are presently used in some electric rail systems in Europe. However, the version (flywheels) that the commenters suggested could be incorporated into the non-electric trains, is in early research stages.

The commenters state that a light-weight low slung Turbo III design would consume less energy than heavier weight locomotive hauled trains. Ultimately, such energy savings would depend upon the actual efficiency of the system as developed, including its accommodations of the needs of its customers.

The commenters also state that the TurboTrain was less noisy than an electric train. Unfortunately, FRA is not aware of actual noise measurements of the TurboTrain. The noise measurements conducted for FRA as part of the FEIS/R show that modern high-speed trains are significantly quieter than existing Amtrak

electric equipment. However Amtrak's existing equipment came on line after the TurboTrain had been retired, which means that the comparison referenced by the commenters was to a still earlier version of electric equipment. An actual comparison between Turbo III and modern equipment would have to await testing of a prototype. FRA did measure the noise generated from the only existing gas turbine powered trainsets, RTL/RTG. These measurements show that the gas turbine train generated more noise at all speed levels than modern high-speed electric equipment. (See Figure 4.4.2 in Volume I of the FEIS/R.)

Myth #3: The commenters imply that the U.S. must look overseas for high-speed train technology. in fact, there are presently no domestically produced high-speed trains. One of the reasons for the Administration proposing its high-speed rail technology development program is to help aid American firms in developing the technologies needed to be competitive in this growing industry. But as stated earlier, it will be some time before these products are available.

With regard to the equipment presently being acquired for Northeast Corridor service, each of the four prequalified consortiums participating in Amtrak's high-speed rail equipment procurement include substantial representation from major domestic manufacturers of rail equipment. The Rail Passenger Service Act's "Buy American" provisions require a 50% domestic content, however, Amtrak's RFP is seeking 70% domestic content. This, together with the need for the equipment to meet North American safety and operating standards, will likely result in a substantial majority of the design and construction taking place in the U.S.

However, while the country of origin and domestic content of specific pieces of equipment used in a project may factor into other parts of an agency's decision making process, it is of limited relevance in an EIS. The issue of concern in the EIS is how such equipment affects

environmental concerns.

Myth#4: *The comment compares the cost of energy of Turbo III and electric operation based on the commenter's estimates of their relative energy efficiency. While the comparison of energy efficiency is an appropriate issue to be analyzed in an EIS, the comparison of costs goes to the economics of the proposal. That is more appropriately addressed in other parts of the agency's decision making process unless the economics prevents implementation of the environmentally preferred alternative, which is not the case with this Proposed Action.*

The commenters assert that the Turbo III would be more energy efficient than electric trains and thus be less costly to operate. FRA believes that there are significant opportunities as part of its high-speed non-electric development program for improvements in energy efficiency over existing non-electric rail prime movers. However, until a Turbo III or other advanced non-electric locomotive/trainset is built and tested, the actual ability to obtain the energy efficiency improvements claimed by their designers cannot be documented.

As stated earlier, the Turbo III design is not consistent with its customer's need and substantial alterations may be required that could affect fuel efficiency. In addition, the fuel consumption for the Turbo III contained in the comment would be a 40% improvement over Amtrak's experience with the TurboTrain, dramatic even without altering the design to meet its customer's needs.

On the other side of the comparison, modern electric trains have demonstrated significant improvements in energy efficiency. During the demonstration of the X-2000 on the Northeast Corridor in 1993, Amtrak measured the energy consumption for a Washington to New York City express run at 4343 kWh with 739 kWh returned through regenerative braking for a projected net take of 3604 kWh (X-2000 - High Speed Rail for

America, Final Report, Amtrak, SJ and ABB, May 1994, Volume II Appendix 9(c)). This would imply an X-2000 Washington to Boston energy consumption of less than half that estimated in the comment for "modern" electric trains.

The commenters' again imply that the electric utilities do not support the Proposed Action because they "are not anxious to add peak loads". As stated elsewhere, utilities commenting on this project have expressed their support.

Myth #5: *The commenters state that non-electric trains routinely operate into Penn Station. This is true. However, as discussed in Section 4.9.3(a) of Volume I of the FEIS/R, the performance of such "dual mode" equipment is significantly inferior to the operation of electric locomotives. In assigning slots for access to the New York City tunnels and Penn Station during peak hours, such "dual mode" locomotives use two slots compared to one slot used by an AEM-7. This is a significant disadvantage in this increasingly congested area.*

Myth #6: *The commenters state that a well designed gas turbine train should be as reliable as an electric train. FRA does not disagree with this comment. However, it needs to be remembered that the railroad environment is significantly different than the aviation environment or fixed facility environment described in the comment as the basis for their conclusions on gas turbine reliability. Special attention will have to be paid in the design of any gas turbine train to accommodate the special conditions encountered in railroading.*

Myth #7: *The comment states that electric trains are incompatible with the rest of Amtrak's network outside the Northeast Corridor. Since gas turbine trains do not require electric catenary, they can be operated throughout the system and thus offer Amtrak more flexibility. This comment does not reflect the realities of Amtrak's operation. The Northeast Corridor main line service*

dominates Amtrak's operations and ridership. This is one reason Amtrak has recently setup the NEC as a separate strategic business unit. There is sufficient long term demand for this service to dedicate a fleet to NEC main line operation.

The key question for Amtrak is compatibility within the NEC operations. There are no plans to abandon electric operations south of New York, indeed FRA is not aware of any transportation official who advocates such a position. Extension of electric traction permits trains to operate from Washington to Boston without an equipment change providing for more efficient and timely operations and having a positive effect on the congestion in the Penn Station area.

Summary: *In summary, the commenters recommend that the Proposed Action not proceed, that Amtrak terminate electric operations south of New Haven and substitute Turbo III's for intercity service on the NEC.*

The issue of whether to maintain the use of electric traction between Washington and New York City was decided as part of FRA's program decision on NECIP in 1978 and is not within the scope of this EIS. The scope of this EIS and the decision before FRA whether or not to proceed with the extension of electric traction from New Haven to Boston and alternatives to that action.

Technology options such as those suggested in these comments have been evaluated as part of this FEIS/R. While they offer the potential for providing many of the environmental benefits that would be derived from the Proposed Action, this non-electric equipment presently does not exist. FRA has proposed a high-speed non-electric locomotive development program and the non-electric high-speed equipment envisioned by the authors could be the product that results from that program. The electric technology exists and foreign versions have been demonstrated in the U.S. The issue that must be faced in this

specific project is whether to make a decision today to proceed with high-speed rail or await the results of yet unfunded development program facing technical and financial uncertainties.

CT-Hearing 4.1

Albert Papp

Comment: [Mr. Papp's oral testimony is a summary of his written comments, which are abstracted and responded to as MC 4-2, MC 4-3, MC 4-4, MC 4-11, and MC 4-16 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 5.1

Jim Musante

Comment: [Mr. Musante's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-36, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 6.1

Tom Ouellette

Connecticut DEP, OLISP

Comment: [The extensive written comments of Connecticut DEP are abstracted and responded to at CT 2-7 earlier in this volume. The oral comments of Mr. Ouellette are a summary of those written comments.]

Response: *See responses to above referenced written comments.*

CT-Hearing 7.1

Alisa Storrow

North Stonington, Connecticut

Comment: Are you going to lower the trestles that go over the water so that the installation can be put in for electrification?

Response: *The proposed action will not reduce any clearance between the bottom of any bridge and the water level.*

CT-Hearing 7.2

Comment: Are you going to stop at New London? How much will tickets cost, New London to Boston?

Response: *Amtrak expects that at least three express trains in each direction will stop daily at New London. In addition, there will be a substantial improvement in the performance of conventional trains which will have 10 stops in each direction in New London daily.*

Amtrak would establish fares to maximize its revenue from this service. It is impossible to predict what the fares would be 15 years in the future. However, they will probably follow the same structure as current Metroliner service between Washington and New York City. In that market, generally express fares are competitive with air fares with conventional fares somewhat lower. The NECTP, on page IX-4, lists the following fares for the service in 2010, which are based on current New York City to Washington rail fares:

	Boston- NYC	Boston- New Haven	Providence- New Haven	Providence- NYC
Express	\$80	\$54	\$39	\$65
Conventional	\$50	\$34	\$24	\$40

CT-Hearing 8.1

Wallace Fenn

Comment: Concerned about the impact of the proposed action on marine traffic.

Response: *See Response 3.4 in this volume.*

CT-Hearing 9.1

Stephen O'Leary

Comment: Concerned that the decision has already been made and that comments are not going to be considered.

Response: *The NECIP program decision made in 1978 included extension of electric traction from New Haven to Boston as part of NECIP. Since 1991, Congress has appropriated funds expressly*

earmarked for this project.

The decision facing FRA is whether to proceed with the Proposed Action or to request Congress to reprogram the appropriated funds for some other purpose. As part of reaching that decision, FRA undertook this environmental analysis of the Proposed Action and its alternatives, including a "do nothing" alternative to identify the environmental implications of that decision. No decision will be reached until this analysis is complete. Comments, both those received at the hearing and those in writing, are a very important part of the process. They are not "votes" for or against. But they do help bring to the analysis the benefit of the public's respective, to help identify issues that need to be addressed and shortcomings in FRA's analysis. With the benefit of these comments, the FEIS/R is a better document and FRA's decision is more informed.

CT-Hearing 10.1

William Murray

Comment: Concerned about the impacts of EMFs and noise.

Response: *See Response 3.5 and 3.6 in this volume.*

CT-Hearing 11.1

Heidi Eddins

Providence & Worcester Railroad Company

Comment: [The oral testimony of Ms. Eddins is a summary of the written comments submitted by P & W. These comments are abstracted and responded to at MC 3-14, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 12.1

Al Paolini

Tilcon

Comment: [The oral testimony of Mr. Paolini is a summary of the written comments submitted by Tilcon. These comments are abstracted and responded to at CT 3-2, earlier in this volume.]

Response: See written comments referenced above.

CT-Hearing 13.1
Charlie Bardong

Comment: Can the electrical lines be run underground?

Response: *The trains must have constant contact with the catenary system to have power, therefore, it would not be possible to run the power lines underground.*

CT-Hearing 13.2

Comment: I think that sound barriers should be considered.

Response: *Volume I, Section 4.3 discusses the use of sound barriers to mitigate the potential noise impacts of the proposed action.*

CT-Hearing 14.1
Joseph Meaney

Comment: Concerned about the windows for movable bridge openings.

Response: See Response 3.4 in this volume.

CT-Hearing 14.2

Comment: The issue concerning the inland route, was that ever discussed?

Response: See Response 3.1 in this volume.

CT-Hearing 14.3

Comment: Concerned about the impacts of the proposed action on freight movements.

Response: See Response 3.3 in this volume.

CT-Hearing 14.4

Comment: Concerned about the health impacts of EMFs and what studies have been done in other countries.

Response: See Response 3.5 in this volume.

CT-Hearing 15.1
Janet Lage

Comment: Concerned about the lack of direct contact by the proponent with the abutters.

Response: *There is not statutory requirement in NEPA for this action. However, notices of scoping and other meetings have been published in many newspapers and sent to TV stations along the entire NEC.*

CT-Hearing 15.2

Comment: Concerned about noise and vibration and the proposed actions impact on property values.

Response: See Response 3.6 in this volume.

It is the general finding of this study that if the Proposed Action's effects on sensitive views and noise levels cannot be mitigated, and if public perceptions regarding EMF's remain unchanged, there could be a small effect on property values.

CT-Hearing 16.1
Keith Anderson
Fortune Plastics

Comment: Concerned about impact of the proposed action on freight movements.

Response: See Response 3.3 in this volume.

CT-Hearing 17.1
Hugh Maclean
Atlantic Wire Company

Comment: Concerned about impact of the proposed action on freight movements.

Response: See Response 3.3 in this volume.

CT-Hearing 18.1
Jim Rice
Town of Old Lyme

Comment: Concerned about the impact of the project on property values.

Response: See response to Comment CT-Hearing

CT-Hearing 19.1

Jason Becker

Comment: [Mr. Becker's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-65 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 20.1

Howard Shoemaker

Comment: Concerned about the visual impact of sound barriers and the wildlife impact of fencing.

Response: *The visual impacts of sound barriers will have to be balanced against the noise impacts of the trains. This issue is discussed in Volume I, Chapter 5 of the FEIS/R. The issue of fencing impacts on wildlife is discussed in Volume I, Section 4.12 of the FEIS/R.*

CT-Hearing 21.1

David Mazzalupo

Comment: Concerned about the closing of Chapman's crossing.

Response: *No grade crossing eliminations are planned or required as part of the Proposed Action. This concern is the result of a separate effort undertaken by FRA. Section 2 of the Amtrak Authorization and Development Act of 1992 directed FRA to develop a plan for the elimination of the remaining 15 grade crossings on the Northeast Corridor unless such eliminations were found to be impracticable or unnecessary. The final plan prepared by FRA and published in July of 1994 addresses these specific issues. It should be noted, however, that in directing FRA to prepare this plan, Congress did not provide FRA authority to implement it. Consistent with prior practice on NECIP, decisions on improvement or elimination of public grade crossings will be made by the appropriate State agencies under State law. Also see response 3.8.*

CT-Hearing 22.1

Catherine Sullivan

Comment: Concerned about the vibration impact of the proposed action on her home.

Response: *See Response 3.6 in this volume.*

CT-Hearing 23.1

Helen Zeiller

Comment: Concerned about the impact of the proposed action on the value of her home.

Response: *See response to Comment CT-Hearing 15.2.*

CT-Hearing 24.1

Senator Peters

Comment: Senator Peters notified the panel that she is the Vice-Chair of a committee which was looking into the environmental and health impacts of EMF.

Response: *Comment noted.*

CT-Hearing 25.1

Tom Ouellette

CT Department of Environmental Management

Comment: [Mr. Ouellet's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 2-7, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 26.1

Robert Simmons

Representative for the 43rd District of Connecticut

Comment: [Representative Simmons' oral testimony is a summary of his written comments, which are abstracted and responded to as CT 1-2, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 27.1

Catherine Cook

Connecticut State Senate

Comment: [Senator Cook's oral testimony is a summary of her written comments,

which are abstracted and responded to as CT 1-14, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 28.1
Ted Rice

Comment: [Mr. Rice's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-55, CT 4-76, and CT 4-133 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 29.1
Jason Becker

Comment: [Mr. Becker's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-65 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 30.1
Bill Cannon

Comment: [Mr. Cannon's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-136 and CT 4-143 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 31.1
Marie Wiley

Comment: [Ms. Wiley's oral testimony is a summary of her written comments, which are abstracted and responded to as CT 4-66 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 32.1
Jonathan Gibson

Comment: [Mr. Gibson's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-74 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 33.1
Naomi Otterness
Office of U.S. Representative Sam Gejdenson

Comment: [Ms. Otterness's oral testimony is a summary of Congressman Gejdenson's written comments, which are abstracted and responded to as CT 1-3 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 34.1
Vincent Faulise

Comment: Mr. Faulise stated his objection to the closing of the Palmer Street at-grade crossing in Pawcatuck, CT.

Response: *See Response 3.8 in this volume.*

CT-Hearing 35.1
Joe Bertoline

Comment: Mr. Bertoline requests that FRA conduct a study of increased cancers due to electrification in Connecticut.

Response: *See Response 3.5 in this volume.*

CT-Hearing 36.1
Robert Fromer

Comment: [Mr. Fromer's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-69 and CT 4-105 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 36.2

Comment: I've seen nothing in the document that indicates where in the regulatory authority there is a definition of what constitutes minor and major increases.

Response: *The beginning of each section in Chapter 4 of Volume I indicates the evaluation criteria for each area of analysis. Where relevant, regulatory guidelines are indicated.*

CT-Hearing 37.1

Peter Gillespie

City of New London, Office of Development and Planning

Comment: [Mr. Gillespie's oral testimony is a summary of City of New London's written comments, which are abstracted and responded to as CT 1-13, earlier in this volume.]

Response: See written comments referenced above.

CT-Hearing 38.1

Kelly House

Comment: Mr. House stated his concern that the project is already begun (as he has seen Amtrak crews at work.)

Response: The electrification project has not begun construction. Any construction currently under way along the NEC is either part of Amtrak's ongoing maintenance program or other projects being undertaken as part of the Northeast Corridor Improvement Program.

CT-Hearing 38.2

Comment: Palmer cove is home to the great blue heron, egrets, osprey, night herons, and we've also observed American bitterns. They're mentioned in Stonington in the report under endangered species. I've observed them in Palmer Cove, and it doesn't seem to be addressed in the report as far as endangered species in the area.

Response: No increase in impacts to nesting ospreys or other nesting wildlife are expected to occur. To insure that ospreys will not be disturbed by construction activities on activities, on activities adjacent to known osprey nesting sites will be avoided from March 15 through August 15.

Amtrak or it's agent will ask the appropriate state and fish and wildlife office to indicate known nesting areas to be avoided.

State-listed endangered or protected species were identified through the

appropriate state Natural Heritage program. In Connecticut, the Natural Diversity Database was consulted on all new sites along the rail line including proposed bridge construction. The federally listed shortnose sturgeon (*Acipenser brevirostrus*), in the Connecticut River, and State-listed American bitterns (*Botaurus lentiginosus*) were reported as occurring in Connecticut. Further consultation is being conducted will appropriate agencies to insure impacts to these species are minimized.

CT-Hearing 38.3

Comment: Mr. House states his concerns about the impacts of the planned Noank paralleling station.

Response: The planned site for the Noank paralleling station has been moved. The new location is shown in Volume I, Appendix A.

CT-Hearing 39.1

Bridget Breen

Comment: Ms. Breen stated her concern about the vibration impacts of the proposed action on her house.

Response: See Response 3.6 in this volume.

CT-Hearing 40.1

Jessica Breen

Comment: Ms. Breen stated her concern that the proposed action will kill animals.

Response: As discussed in Volume I, Section 4.12.3 of the FEIS/R, the proposed action is not predicted to significantly impact wildlife along the NEC.

CT-Hearing 41.1

Chris Breen

Comment: Mr. Breen stated his concerns about the impact of the proposed action on endangered species.

Response: Identification of endangered, rare, or threatened species were addressed

through contact with the U.S. Fish and Wildlife Service, and the Connecticut, Rhode Island and Massachusetts Natural Heritage programs.

Protected resources threatened by the project were identified and further consultation was conducted where required to demonstrate the project will have minimum adverse impacts.

CT-Hearing 42.1

Jim Repass

Northeast Corridor Initiative

Comment: [Mr. Repass' oral testimony is a summary of the Northeast Corridor Initiative's written comments, which are abstracted and responded to as RI 3-3, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 43.1

Tom Wagner

Town of Waterford

Comment: [Mr. Wagner's oral testimony is a summary of the Town's written comments, which are abstracted and responded to as CT 1-4, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 44.1

Dora Hill

Comment: [Ms. Hill's oral testimony is a summary of her written comments, which are abstracted and responded to as CT 4-21, CT 4-109, and CT 4-158 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 45.1

Ann Crotty

Comment: Ms. Crotty expressed her concern that the noise, vibration, and visual impacts of the proposed action will have an adverse effect on property values in the coastal Connecticut area.

Response: *See response to Comment CT Hearing 15.2.*

CT-Hearing 46.1

David Bentley

Comment: Mr. Bentley expressed great concern over the structural reliability of the railroad bridges along the NEC.

Response: *The bridges on the NEC main line have been and will be replaced as needed as part of NECIP or ongoing maintenance programs sponsored by State departments of transportation in areas where the NEC main line is owned by the State. Amtrak inspects the structural condition of its bridges annually with quarterly inspections of moveable bridges and makes any needed repairs.*

Most of the bridges on the NEC main line were designed during the steam era of railroading when this rail line carried substantially more freight than it now does. As a consequence, the bridges were designed for loads far greater than they are subjected to now or will be subjected to for the foreseeable future. This additional strength permits continued safe operation of trains even if the bridges superficially appear to need repair.

CT-Hearing 47.1

Joseph Geary

Comment: [Mr. Geary's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-64, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 48.1

Tim McDowell

Comment: Mr. McDowell expressed concern that American-built trains will not be used.

Response: *At the present time, no U.S. firms are engaged in the production of high-speed rail equipment. As part of the Amtrak's high-speed equipment procurement, six teams were prequalified, of which four*

remain. Each of these four has substantial U.S. representation. As stated in response to comment CT 4-16.6, it is expected that a combination of Amtrak's "Buy American" requirements and North American safety and performance requirements will result in the large majority of this equipment's design and production occurring in this country.

CT-Hearing 48.2

Comment: Mr. McDowell expressed concern that the proposed action will lead to the closing of several harbors.

Response: *See Response 3.4 in this volume.*

CT-Hearing 48.3

Comment: Mr. McDowell also expressed concern about the rationale for the cost of the project and about the closings of at-grade crossings.

Response: *Discussions about the cost of the project are beyond the scope of this environmental study. As discussed in the response to CT-Hearing 21.1, above, this study does not recommend or assume the closing of any at-grade crossings.*

CT-Hearing 49.1

Frank Williams

Comment: Mr. Williams stated that the existing shoreline right-of-way is not appropriate for high-speed rail due to its curvature. He recommends that an alternative route be used.

Response: *See Response 3.1 in this volume.*

CT-Hearing 50.1

James Buckley

Comment: Mr. Buckley expressed concern that the DEIS/R does not address the impacts to the migration of animals across the tracks once fencing is installed.

Response: *As discussed in the FEIS/R, fencing is not recommended for the entire right-of-way. Therefore, the impacts to animal migration is not predicted to be*

significant. Volume I, Section 4.12 discusses this issue.

CT-Hearing 50.2

Comment: Mr. Buckley stated his dismay at the quality and lack of definition in the photographs in the DEIS/R.

Response: *These photos have been revised for the FEIS/R. It should be noted that these photographs are intended to offer a comparison of the visual change between the build and no-build options.*

CT-Hearing 51.1

James Gibbs

Mystic Environmental Design

Comment: [Mr. Gibbs' oral testimony is a summary of Mystic Environmental Design's written comments, which are abstracted and responded to as CT 3-24, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 52.1

Amy Hainline

Comment: [Ms. Hainline's oral testimony is a summary of her written comments, which are abstracted and responded to as CT 4-15, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 53.1

Jack Steel

Comment: What impact would electrification (poles, wires, and faster trains) have on wildlife that thrive along the tracks?

Response: *Impacts to wildlife are detailed in Volume I, Section 4.12.*

CT-Hearing 53.2

Comment: The DEIS/R does not show the economic benefits of a non-coastal route.

Response: *A discussion of alternative routes is contained in Volume I, Section 2.2.*

CT-Hearing 53.3

Comment: What impact would there be within the coastal flood plain and the wetlands?

Response: *Impacts to natural resources are discussed in Volume I, Section 4.12.*

CT-Hearing 53.4

Comment: What is going to happen to the poles that exist currently, the CL& P lines?

Response: *The existing Amtrak signal poles and wires will all be removed over time. Poles other than these are not under the purview of this project. However, no additional lines other than those directly necessary for electrification would be placed on the catenary poles.*

Response: *See written comments referenced above.*

CT-Hearing 53.5

Comment: What is being done to protect the ospreys and herons and other wildlife?

Response: *See response to Comment CT-Hearing 53.1.*

CT-Hearing 53.6

Comment: The DEIS/R missed protected land such as property in Stonington held by the Mashantucket Land Trust.

Response: *This error has been corrected in the FEIS/R.*

CT-Hearing 53.7

Comment: How do you plan to protect the state listed endangered species?

Response: *See response to Comment CT-Hearing 53.1.*

CT-Hearing 53.8

Comment: The number of VSRs in Should have been higher.

Response: *The visual analysis was updated in the FEIS/R. Volume I, Table 3.11-1 contains*

an updated list of VSRs.

CT-Hearing 53.9

Comment: Wilcox Road is mis-identified as Wilcox Avenue.

Response: *This error has been corrected in the FEIS/R.*

CT-Hearing 54.1 James Musante

Comment: [Mr. Musante's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-36, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 55.1 Wallace Fenn

Comment: [Mr. Fenn's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-43 and CT 4-137, earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 56.1 Albert Papp

Comment: [Mr. Papp's oral testimony is a summary of his written comments, which are abstracted and responded to as MC 4-2, MC 4-3, MC 4-4, MC 4-11, and MC 4-16 earlier in this volume.]

Response: *See CT Hearing 3.1.*

CT-Hearing 57.1 Frank Williams

Comment: Mr. Williams noted that the gas-turbine train that Amtrak used on the NEC could get no more than 20 percent power from New London to Westerly due to the curvature of the track.

Response: *Comment noted.*

CT-Hearing 58.1

George Haikalis

Comment: [Mr. Haikalis' oral testimony is a summary of his written comments, which are abstracted and responded to as MC 4-2, MC 4-10, and MC 4-16 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 59.1

Robert Welsh

Comment: [Mr. Welsh's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-16 earlier in this volume.]

Response: *See written comments referenced above.*

CT-Hearing 60.1

Ted Rice

Comment: [Mr. Rice's oral testimony is a summary of his written comments, which are abstracted and responded to as CT 4-55, CT 4-76, and CT 4-133 earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 1.1
Bruce Sundlun
Governor of Rhode Island

Comment: Governor Sundlun commented that the DEIS/R failed to recognize that placement of the catenary support poles must not preclude the development of a third track in Rhode Island.

Response: *The mitigation incorporated into the electrification FEIS/R (Volume I, Section 5.1.1(i)) will require Amtrak to develop the electrification project to accommodate whatever approach the State decides to undertake to accommodate the needs of this port. Also see Response 3.3 in this volume.*

RI-Hearing 1.2

Comment: Governor Sundlun commented that the DEIS/R did not adequately and accurately describe the impacts to freight rail movements due to clearance and operating window issues.

Response: *Volume I, Section 4.9 of the FEIS/R has been revised to present an expanded discussion of impacts to freight movements. As stated in the FEIS/R, the proposed action will maintain all existing clearances along the entire NEC. See Response 3.3 in this volume.*

RI-Hearing 2.1
Edmund Parker
Rhode Island Department of Transportation

Comment: [The oral testimony of Mr. Parker is a summary of RIDOT's written testimony, which has been abstracted and responded to as RI 2-1 and RI 2-3, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 3.1
John Riendeau
Rhode Island Department of Economic Development and Rhode Island Port Authority

Comment: [The oral testimony of Mr. Riendeau is a summary of the Rhode Island Port Authority's written testimony, which has

been abstracted and responded to as RI 2-2 and RI 2-8, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 4.1
Heidi Eddins
Providence & Worcester Railroad Company

Comment: [The oral testimony of Ms. Eddins is a summary of P & W's written testimony, which has been abstracted and responded to as MC 3-14 through 3-17, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 5.1
Douglas Mancosh
B.B. & S. Treated Lumber

Comment: Mr. Mancosh expressed his concern about the impact of the proposed action on freight rail movements.

Response: *See Response 3.3 in this volume.*

RI-Hearing 6.1
Steven Musen
Rhode Island Association of Railroad Passengers

Comment: [The oral testimony of Mr. Musen is a summary of the Association's written testimony, which has been abstracted and responded to as RI 3-12, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 7.1
Barry Does
Colfax, Inc.

Comment: [The oral testimony of Mr. Does is a summary of Colfax's written testimony, which has been abstracted and responded to as RI 3-2, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 8.1
Janet White
Greater Providence Chamber of Commerce

Comment: [The oral testimony of Ms. White is a

summary of the Chamber's written testimony, which has been abstracted and responded to as RI 3-11, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 9.1
Robin Porter
Rhode Island State Senator

Comment: Senator Porter expressed concern about the impacts of the proposed action on commuter and freight rail traffic.

Response: *See Response 3.3 in this volume.*

RI-Hearing 9.2

Comment: Senator Porter expressed concern about the health impacts of EMFs associated with the proposed action.

Response: *See Response 3.5 in this volume.*

RI-Hearing 10.1
Daniel Baudouin
Providence Foundation

Comment: [The oral testimony of Mr. Baudouin is a summary of the Foundations's written testimony, which has been abstracted and responded to as RI 3-1, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 11.1
Karen Salvatore
DOT Watch

Comment: Ms. Salvatore requested that FRA communicate with the FAA to ensure that the NECIP is coordinated with airport expansion plans.

Response: *Comment noted.*

RI-Hearing 12.1
Adi Sukkar
Office of U.S. Representative Jack Reed

Comment: [The oral testimony of Ms. Sukkar is a summary of Representative Reed's written testimony, which has been

abstracted and responded to as RI 1-6, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 13.1
Barbara Learned
North Kingstown Town Council

Comment: [The oral testimony of Ms. Learned is a summary of the Town of North Kingstown's written testimony, which has been abstracted and responded to as RI 1-5, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 14.1
Eugenia Marks
Audubon Society of Rhode Island

Comment: [The oral testimony of Ms. Marks is a summary of the Audubon Society's written testimony, which has been abstracted and responded to as RI 3-14, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 15.1
Gerald Gannon
G.M. Gannon Company

Comment: [The oral testimony of Mr. Gannon is a summary of his written testimony, which has been abstracted and responded to as RI 3-5, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 16.1
Allison Walsh
Save the Bay

Comment: [The oral testimony of Ms. Walsh is a summary of the written testimony of Save the Bay, which has been abstracted and responded to as RI 3-10, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 16.2

Comment: We are very concerned about the

reconnection of the bay which happens to be mostly in the southern part of Connecticut.

Response: *The Army Corps of Engineers, under the auspices of Coastal America, conducted an investigation of the affect of transportation structures on these coves. The study concluded that the overall bridge/embankment complexes are not a primary cause of saltmarsh degradation, nor were they causing significant tidal flow restrictions. See Volume I, Section 4.12 of the FEIS/R.*

RI-Hearing 17.1
Jonathan Stevens
City of Warwick, RI

Comment: The City requests that a commuter rail station be build at Green State Airport.

Response: *The Proposed Action will not preclude the development of a commuter rail station at Green State Airport. However, the construction of such a station is not within the scope of this study.*

RI-Hearing 17.2

Comment: Mr. Stevens also mentioned several issues that will require coordination between Amtrak and the City during the design and construction of the proposed action.

Response: *These issues are not substantive comments on the DEIS/R. However, they are issues that should be coordinated between the City and Amtrak as part of the project and have been referred to Amtrak for coordination.*

RI-Hearing 18.1
David Prior
Cranston Print Works Company

Comment: Mr. Prior expressed his support for the establishment of a third track in Rhode Island.

Response: *FRA has directed Amtrak to ensure that the design for the NECIP is coordinated with the State of Rhode Island and Providence & Western Railroad in regard*

to the Davisville/Quonset Point Project. Amtrak will be directed to ensure that wherever possible, it coordinates its design and construction action to accommodate any plans for development as part of the Davisville/Quonset Point project.

RI-Hearing 19.1
Oscar Shelton

Comment: [The oral testimony of Mr. Shelton is a summary of his written testimony, which has been abstracted and responded to as RI 4-7, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 20.1
Roy Dempsey

Comment: [The oral testimony of Mr. Dempsey is a summary of his written testimony, which has been abstracted and responded to as RI 4-2, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 21.1
Patricia Minacapilli

Comment: Ms. Minacapilli requested to know why the cables cannot be placed underground.

Response: *Electric trains requires constant contact between the train and the source of electricity. This can be achieved in two ways: through a third rail systems as is common on urban transit (subway) systems and some rail systems or through a overhead systems as with the proposed action. While the third rail system does not require electrical wires to placed on poles, but it does require a charged third rail to be exposed at ground level. This can create a safety hazard to pedestrians and wildlife. Volume I, Chapter 2 of the FEIS/R presents a more in-depth discussion of these alternatives.*

RI-Hearing 21.2

Comment: Ms. Minacapilli expressed concern that the figure given for the distance from the track that EMFs are measurable may

change over time.

Response: *The FEIS/R uses a figure of 150 feet as the limit of exposure to EMFs because after about 150 feet the strength associated with electrical lines becomes very low (less than 4 mG) and frequently indistinguishable from other EMF "background" sources (other power lines, homes, vehicles, lighting, etc.). Volume I, Section 4.5 of the FEIS/R, presents a more detailed discussion of the impacts of EMFs.*

RI-Hearing 22.1

Linda Seiler

Comment: Ms. Seiler expressed concern over the potential damage to the OCS from hurricanes.

Response: *The electrification system is designed to withstand the forces of nature that it will be subjected to. This includes hurricane strength winds, icing conditions, cold weather, etc. The system is designed with a safety factor of at least 200% (300% for critical components).*

RI-Hearing 22.2

Comment: Ms. Seiler expressed concern over the possibility of ozone generation from the proposed action.

Response: *Ozone formation does occur in the immediate area of the catenary cable and from sparking between the wheels and rails of an electric powered locomotive. The quantities of ozone formed from sparking from electric locomotives have not been measured; however, these amounts are thought to be minute. In fact, ozone resistant materials are used for the pantograph and cabling, and tolerances for gaps between these components are very restrictive in order to minimize corona sparking, loss of power, and ozone formation. High quality, well maintained wheels and continuous welded rails are also used to minimize sparking and loss of power.*

These minuscule amounts of ozone generated in the immediate vicinity of the

sparkling dissipate rapidly in the ambient air, and are not sufficient to cause measurable increases in the measured ozone levels in the region.

RI-Hearing 22.3

Comment: Ms. Seiler expressed concern over the impact of the proposed action on historic districts.

Response: *Volume I, Section 4.3 discusses the proposed action's impact to historic resources along the NEC.*

RI-Hearing 22.4

Comment: Ms. Seiler expressed concern over the potential health impacts of EMFs on residences near the tracks.

Response: *Volume I, Section 4.5 presents an expanded discussion on EMFs and health impacts.*

RI-Hearing 22.5

Comment: The other thing is property devaluation, municipal budgets and the inability to sell homes due to the proposed project.

Response: *Volume I, Section 4.2 of the FEIS/R discusses the proposed project's impact on property values.*

RI-Hearing 23.1

Mark Laroche

Environmental Council of Rhode Island

Comment: Mr. Laroche expressed the Council support of the project with minor reservations in the areas of expansion of the project into Maine, increased use of electricity, and the possibility that the project should be used as a reason to purchase electricity from Hydro-Quebec.

Response: *Expansion into Maine is not part of the proposed action and would require a separate environmental study. While the FEIS/R does show an increase in electricity usage with the proposed action, overall energy usage is reduced.*

The Council's concern regarding Hydro-Quebec is noted.

RI-Hearing 24.1
Oscar Shelton

Comment: [The oral testimony of Mr. Shelton is a summary of his written testimony, which has been abstracted and responded to as RI 4-7, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 25.1
Sarah Bliven

Comment: [The oral testimony of Ms. Bliven is a summary of her written testimony, which has been abstracted and responded to as RI 4-4, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 26.1
Robert Romer

Comment: Mr. Romer stated that his concerns are the same as Ms. Bliven's (see comments RI 4-4).

Response: *See written comments referenced above.*

RI-Hearing 27.1
Bruce Hamilton

Comment: [The oral testimony of Mr. Hamilton is a summary of his written testimony, which has been abstracted and responded to as RI 4-1, earlier in this volume.]

Response: *See written comments referenced above.*

RI-Hearing 28.1
Barry Schiller
Sierra Club of Rhode Island

Comment: The Sierra Club of Rhode Island supports the proposed action with some additional comments including: where the electricity is coming from, EMF impacts on health, and impacts to freight and commuter service.

Response: *The electricity will be bought from local utilities. It will be a comparatively minor*

component of power demand in the region, less than one percent and therefore cannot be attributable to any particular power plant. The discussion of EMF and freight/commuter service issues has been expanded in the FEIS/R. Also see responses 3.5 and 3.3.

RI-Hearing 29.1
William Thatcher

Comment: Mr. Thatcher refuted many of the points discussed by Oscar Shelton (Comment MC 4-7) and spoke in favor of the Third Track proposal.

Response: *See response to Comment RI Hearing 18.1.*

RI-Hearing 30.1
Rick Nagele

Comment: Mr. Nagele spoke in favor of eliminating the Keynon School Road Bridge and not rebuilding it.

Response: *Comment noted.*

RI-Hearing 31.1
Oscar Shelton

Comment: Mr. Shelton responded to the comments by William Thatcher in regard to the Third Track proposal.

Response: *Comments noted.*

MA-Hearing 1.1

Leo Purcell

Massachusetts Building Trades Council

Comment: Mr. Purcell expressed the support of the Council for the proposed action.

Response: *Comment noted.*

MA-Hearing 2.1

Steve Olanoff

Town of Westwood Planning Board

Comment: [The oral testimony of Mr. Olanoff is a summary of the written comments of the Planning Board, which is abstracted and responded to as MA 1-4, earlier in this volume.]

Response: *See written comments referenced above.*

MA-Hearing 3.1

Nina Wilds

Cliffmont Condominium Trustees

Comment: Ms. Wilds expressed concern about the health impacts of EMFs.

Response: *See Response 3.5 in this volume.*

MA-Hearing 3.2

Comment: Ms. Wilds requested the noise differential between diesel and electric trains.

Response: *Volume I, Section 4.4 of the FEIS/R discusses noise and vibration impacts of the proposed action as opposed to the no-build alternative (continued operation of diesel trains).*

MA-Hearing 3.3

Comment: I understand that barriers would be put in place to help solve noise problems. I'm concerned about how they would look.

Response: *The exact type of noise barrier required could vary depending on location and impact. However, these barriers would be designed with community input.*

MA-Hearing 4.1

Mary Snyder

Neponset River Watershed Association

Comment: [The oral testimony of Ms. Snyder is a summary of the written comments of the Association, which is abstracted and responded to as MA 3-2 and MA 3-8, earlier in this volume.]

Response: *See written comments referenced above.*

MA-Hearing 5.1

Sherry Golden

Comment: [The oral testimony of Ms. Golden is a summary of her written comments, which is abstracted and responded to as MA 4-8, earlier in this volume.]

Response: *See written comments referenced above.*

MA-Hearing 6.1

Bob DiMeco

Boston Transportation Department

Comment: Mr. DiMeco's testimony consisted of the submission of a letter presenting BTB's comments on the DEIS/R. That letter is abstracted and responded to as MA 2-13, earlier in this volume.

Response: *See written comments referenced above.*

MA-Hearing 7.1

John Thompson

Comment: Mr. Thompson expressed concern over notification, the potential health and noise impacts of the project, but was generally supportive.

Response: *Comment acknowledged.*

MA-Hearing 8.1

Kenneth Spolsino

Comment: [Most of Mr. Spolsino's oral testimony was a summary of his written comments, which are abstracted and responded to as MA 4-17, earlier in this volume.]

Response: *See written comments referenced above.*

MA-Hearing 8.2

Comment: Mr. Spolsino expressed concern about construction related trucks going through

the neighborhoods.

Response: *The vast majority of construction related activity will be handled from the track. Therefore, the possibility that trucks will need to drive through residential neighborhoods is minimal.*

**MA-Hearing 9.1
Sam Conti**

Comment: Mr. Conti expressed the opinion that he was opposed to the whole project.

Response: *Comment noted.*

**MA-Hearing 10.1
Joe Heisler
Dave Village Condominiums**

Comment: Mr. Heisler commented that the DEIS/R fails to look at the management and operational record of Amtrak.

Response: *The management and operational history of Amtrak is a factor taken into account in developing a Record of Decision, it is not appropriate to the environmental impact process. However, it should be noted that Amtrak is under new management and will hopefully be more responsive to your needs in the future.*

MA-Hearing 10.2

Comment: Mr. Heisler requested that the FEIS/R consider the recent noise study by Acentech Incorporated.

Response: *It is important to recognize that the Acentech study and the DMJM/Harris study are distinctly different with regard to their objectives. The objective of the Acentech study was to evaluate what improvements could be made to the existing noise environment along the Northeast Corridor between Dedham Manor and Jamaica Plain, MA. Near this segment of the corridor, the existing train noise exposure is dominated by MBTA Commuter Rail operations, rather than by Amtrak operations, and recommendations for noise impact mitigation were based on an absolute standard. In contrast, the objective of the*

DMJM/Harris study is to evaluate the potential noise impact from the change in the noise environment due to the proposed Electrification Project along the Northeast Corridor between New Haven, CT and Boston, MA. In view of this objective, the noise impact criteria and mitigation recommendations for the electrification study are based on the projected increase in cumulative noise level relative to the existing noise environment. These project noise increases are related to anticipated increases in Amtrak train speed, length and frequency of operation due to the project.

MA-Hearing 10.3

Comment: Mr. Heisler expressed concern about the potential health impacts of EMFs caused by the proposed action.

Response: *See Response 3.5 in this volume.*

**MA-Hearing 11.1
Terry Heisler**

Comment: Ms. Heisler expressed concern regarding noise, vibration, and safety issues.

Response: *These issues are addressed in the FEIS/R in Volume I, Sections 4.4 and 4.7.*

**MA-Hearing 12.1
Jim Repass
Northeast Corridor Initiative**

Comment: Mr. Repass expressed his support of the proposed action.

Response: *Comment noted.*

**MA-Hearing 13.1
Bernie Doherty
Jamaica Plain Neighborhood Council**

Comment: Mr. Doherty expressed his dissatisfaction with the level of information dissemination on plans for the NECIP.

Response: *Comment noted.*

MA-Hearing 14.1

Rita Mandosa

Comment: [The oral testimony of Ms. Mandosa is a summary of her written comments, which are abstracted and responded to as MA 4-18, earlier in this volume.]

Response: *See written comments referenced above.*

MA-Hearing 15.1

James Lesnick

Comment: Mr. Lesnick expressed his general support for high-speed rail projects.

Response: *Comment noted.*

MA-Hearing 16.1

Kathleen Rowlings

Comment: [Ms. Rowlings' oral testimony was a summary of her written comments, which are abstracted and responded to as MA 4-45, earlier in this volume.]

Response: *See written comments referenced above.*

MA-Hearing 17.1

Robert Moctusik

Comment: Mr. Moctusik expressed his general support of the proposed action.

Response: *Comment noted.*

MA-Hearing 18.1

Ed McCarthy

Comment: Mr. McCarthy expressed concern about EMFs and asked if the transmission lines could be placed underground.

Response: *Electric trains requires constant contact between the train and the source of electricity. This can be achieved in two ways: through a third rail systems as is common on urban transit (subway) systems and some rail systems or through a overhead systems as with the proposed action. While the third rail system does not require electrical wires to placed on poles, but it does require a charged third rail to be exposed at ground level. This can create a safety hazard to pedestrians*

and wildlife. Volume I, Chapter 2 of the FEIS/R presents a more in-depth discussion of these alternatives.

MA-Hearing 19.1

Wendy Blundell

Comment: Ms. Blundell expressed concern over the impact of the proposed action on property values.

Response: *It is the general finding of this study that if the Proposed Action's effects on sensitive views and noise levels cannot be mitigated, and if public perceptions regarding EMF's remain unchanged, there could be a small effect on property values.*

MA-Hearing 20.1

Joyce Pulley

Comment: Ms. Pulley requested that the FEIS/R address the possibility of derailment at increased speeds.

Response: *Volume I, Section 4.8 of the FEIS/R discusses the impacts of the proposed action on public safety.*

MA-Hearing 21.1

Mary Rolfes

Comment: [Ms. Rolfes' oral testimony was a summary of her written comments, which are abstracted and responded to as MA 4-15, earlier in this volume.]

Response: *See written comments referenced above.*

MA-Hearing 22.1

George Hardiman

Comment: Mr. Hardiman inquired as to what the construction schedule was.

Response: *Upon approval of the FEIS/R and the signing of the Record of Decision by Amtrak and other appropriate parties, Amtrak would seek construction permits and environmental approvals. Once they were issued, Amtrak would then be allowed to proceed with construction, which according to Amtrak would take approximately three years from the onset*

to complete.

MA-Hearing 23.1
Martha Meany

Comment: [Ms. Meany's oral testimony was a summary of her written comments, which are abstracted and responded to as MA 4-19, earlier in this volume.]

Response: See written comments referenced above.

MA-Hearing 24.1
Jerry Carchedi

Comment: Mr. Carchedi inquired about the process for public input on the selection of mitigation measures such as noise barriers.

Response: The MBTA, in coordination with Amtrak, would work with the city and nearby residents in areas where noise barriers would be required. However, based on the noise monitoring program discussed in Volume I, Section 5.1, barriers would not be installed in many locations at the onset of electric service.

MA-Hearing 25.1
Robin Simon

Comment: Ms. Simon expressed concern about the lack of maintenance of the fence between the property she manages in Roslindale and the tracks.

Response: The NEC main line in Massachusetts is owned by the Massachusetts Bay Transportation Authority which is responsible for the upkeep of the right-of-way including fences. Amtrak is merely a tenant on this property. Notwithstanding that relationship, the Section 5.1 of FEIS/R requires Amtrak to work with the MBTA to develop and implement a plan to address right-of-way safety issues.

MA-Hearing 26.1
James Lesnick

Comment: Mr. Lesnick requested that FRA only allow Amtrak to operate trains at current speed levels in the City of Boston until they have proven that they will comply

with all of the mitigation requirements.

Response: The operating characteristics of the trains, as well as the vertical and horizontal geometry of the track, track condition, the location of stations, and other factors are used by Amtrak to develop the speed limits at any specific location. FRA has safety regulatory jurisdiction over all aspects of rail operations. Any operations above 110 mph presently require special permission from FRA and Amtrak will have to demonstrate that it can operate safely before that permission will be granted.





